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An Address ON JOHN WARD AND HIS DIARY.

Delivered at the Medical Society of London on the Occasion of His Induction as President, Oct. 9th, 1916,

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PART I.

GENTLEMEN,—I cannot begin this address without expressing my sense of the great honour you have conferred upon me by placing me in this chair. My unworthiness to fill it is borne in upon me with especial force when I look round and see on the walls of this room the names of my 96 predecessors, all eminent in their profession, many illustrious also for their civic and moral virtues. The tradition of the society is a great one, and will prove hard to maintain in the third year of a war which has dislocated every relationship in life. I can count, however, upon the loyal support of my secretaries and the other officers of the society, and with their help I hope to hand it on unbroken to my successor.

It is usual for the President to give an address at the beginning of his year of office upon a subject which is of interest to the society. To some the selection of a topic must have been difficult. I am fortunate in having one ready to hand, because three or four years ago the Council gave me permission to transcribe the manuscript volumes known to us as "John Ward's Diaries." They have long been amongst the most treasured possessions in our library, and, as the event proved, they have never been adequately examined. It is not known how they came into our possession, but in all probability they formed part of the collection of books belonging to Dr. James Sims, who was President from 1786–1809. This long tenure of office caused the schism which led to the foundation of the Royal Medical and Chirurgical Society, which now flourishes as the Royal Society of Medicine.

The note-books are 16 in number, roughly uniform in size, measuring 5¼ × 3¼ inches, and have been whole-bound in calf. One volume has "J. W." stamped in gold, back and front—the precursor of a book-plate. The volumes vary in thickness. The writing is on both sides of the page, sometimes only a word or two, sometimes with blank pages, but for the most part so much crowded that a reading-glass is necessary to decipher it. The volumes follow a sequence of years from 1647–48 until 1673, but the order of date is not followed strictly year by year, though it looks as if a new volume was not usually begun before the previous one was filled. The books are in no sense diaries or records of events from day to day like the diaries of John Evelyn or Samuel Pepys. They are rather of the nature of "table books," or "common-place" books, in which Ward recorded from time to time notes of what he had read or heard, or ideas and suggestions which might prove serviceable. Although there is nothing of great historical interest, yet the general view gained from reading them affords an insight into the character of Ward which is valuable as giving the opinions and occupations of a scholar and a gentleman during the Commonwealth and Restoration periods.

DR. SEVERN'S BOOK ON THE DIARIES.

An investigation of the minutes of this society shows that on Oct. 5th, 1838, "a letter was read from Dr. Severn announcing that the MSS. of Dr. John Ward, of Stratford, in the society's library, contained curious matter relating to Shakespeare, &c. It was resolved that a committee should be appointed to investigate the subject and report thereupon to the Council at their earliest convenience. The following gentlemen were nominated on the committee: Messrs. Clifton Dendy, Headland, Kingdon, and Roberts." On Nov. 23rd, 1838, the committee appointed to examine Dr. John Ward's MSS. reported that "although they had found much that was amusing, interesting and instructive among them, yet they were of too desultory a nature: the historical, medical, and clinical notices too much mingled together for the Society to offer them in their present state to the public, but that, Dr. Severn having made extracts from them, the Society might give him permission to publish them, he acknowledging that it was done with the Society's sanction." The committee also recommended that the other manuscripts in the society's possession be catalogued. It was further resolved that permission be given to Dr. Severn to publish extracts from the MSS. of the Rev. John Ward.

Dr. Severn lost no time in availing himself of the permission, and early in the year 1839 there appeared an octavo volume of 315 pages with the title-page, "Diary of the Rev. John Ward, A.M., Vicar of Stratford-upon-Avon, extending from 1648 to 1679. From the Original MSS. preserved in the Library of the Medical Society of London. Arranged by Charles Severn, M.D., Member of the Royal College of Physicians in London, Registrar to the Medical Society of London. Published by permission of the Council. London: Henry Colburn, Publisher, Great Marlborough-street. 1839." This volume consists of a dedication to the President and other officers of the Medical Society; of a preface; of some account of the life of the Rev. J. Ward, A.M., and of a series of short articles upon Shakespeare, which together occupy the first 87 pages. The remaining 228 pages deal with the diary itself. It is clear that Dr. Severn had only made a superficial examination, but we owe him a debt of gratitude, not only for calling attention to the volumes, but also for the assiduity with which he gathered such biographical details of Ward as were then available.

Of Severn himself I have only been able to collect the following facts. He was admitted a Licentiate of the Society of Apothecaries on May 16th, 1816, and was found qualified to practise in any part of England and Wales, including the City of London and ten miles round. He lived for a time in Jewin-street, E.C., and from there published "First Lines in the Practice of Midwifery, to which are added remarks on the forensic evidence requisite in cases of fœticide and infanticide. 8vo. Lond., S. Highley, 1839." He was admitted an extra licentiate of the Royal College of Physicians of London on Oct. 1st, 1832, and he had then obtained the degree of M.D., but from what university is now unknown. It was not from Oxford, Cambridge, or Glasgow. In 1839 he edited "The Lectures on the Principles and Practice of Midwifery by James Blundell," 12mo, J. Masters. This little book he dates from the society's house in Bolt-court, Fleet-street. He died in the summer of 1840, apparently leaving a wife and daughter.

The society's minute records on Sept. 4th, 1840, that "Mr. Dendy reported to the committee the decease of Dr. Charles Severn, the late Registrar." A vote of condolence was passed, and in accordance with the appreciation of his services, and, moreover, regarding the advanced age and debility of Mrs. Severn, the Council requests the family to remain in the society's house in order that they may take charge of its property and fulfil the directions of its librarians and secretaries until arrangements may be made regarding the office. Miss Severn performed the duties of Registrar until Sept. 5th, 1850, when Mr. Ley was appointed sub-librarian. On Nov. 9th, 1850, Mr. Dendy called attention to the claims of Miss Severn, and proposed that "on her leaving the premises in Bolt Court she be paid a year's salary to March next." This was seconded by Dr. Greenhalgh and agreed to. Miss Severn received £21 in March, 1851, the year in which the society migrated from Bolt-court to George-street, Hanover-square.

ASCERTAINABLE FACTS ABOUT JOHN WARD.

Before I give any extracts from the manuscript volumes which lie before you, it may be interesting to gather such facts about the writer as are still available. He was born at Spratton in Northamptonshire in the year 1629, the elder of the two sons of John Ward, M.A. of Pembroke College, Oxford, by Dorothy, a daughter of Richard Pargeter. John Ward the father was a gentleman of property,[1] who became a lieutenant in Colonel Appleyard's regiment of foot at the outbreak of the Civil War, was taken prisoner by the Parliamentary forces at Naseby in 1645, and probably died soon afterwards, for John Ward the younger makes no mention of his father, though his mother was living some

[1] His father, Daniel Ward (d. 1627), bought the estate and manor of Houghton Parva from Lord Zouche at the beginning of the reign of King Charles I., and he also held lands at Stoke Albany and Wilbarston, which he had purchased from Lord Danvers.

years later. The younger son, Thomas, became rector of Stow-on-the-Wold.

John Ward, the writer of the note-books, went to Oxford in the middle of "the broken times," as they were called by Anthony Wood, when the University and College lists were badly kept. It is not surprising, therefore, that his name does not appear in the registers. He states, however, that "I was presented Mr. of Arts about the year 1652 in Easter terme. Anthony Ratcliffe and Philip Gerard and Mr. Temple with us."

Anthony Ratcliffe, of Magdalene College, Cambridge, matriculated 1st October, 1645, was incorporated 16th March, 1648–49, student of Christ Church by the visitors; B.A. 23rd May, 1649; M.A. 6th May, 1652; canon 11th February, 1680–81; chaplain to Henry Earl of Arlington; vicar of Leigh, Kent, 1661; died June, 1705.

Philip Gerard, son of William of London, gent., Christ Church, matriculated 29th January, 1646–47, aged 13, from Westminster School; B.A. 8th July, 1649; M.A. 6th May, 1652.

"Mr. Temple" was John, of Pembroke Hall, Cambridge. Admitted 30th January, 1645–46; student of Christ Church, 1648, by the visitors; B.A. 8th July, 1649; M.A. 6th May, 1652; vicar of Haughton 1660, and of Portslade, Sussex, 1669.

Ward also speaks of "our table at Christ Church"—i.e., the Master of Arts table in Hall where the resident Masters dined together. It is fair to assume, therefore, that Ward matriculated at Christ Church at the end of 1646 or the beginning of 1647, graduated B.A. in July, 1649, and took his degree of M.A. on May 6th, 1652. It is an interesting sign of the times that two of his friends had been incorporated from Cambridge, because such migrations at this time were usually due to political causes. It appears from various notes scattered through the books that he remained in residence at Oxford until the Restoration, when the whole social atmosphere of the University underwent such a change as to make it uncongenial to those who had lived in it through the period of the Commonwealth. During this time his interests lay in history and in science—chiefly chemistry, botany, medicine—and in general literature. He never took the degree of Bachelor of Physic, but it is probable that he held the status of student of medicine, a status then recognised in the University and only abolished within my own recollection. At any rate, he treated many sick persons by medicine, though it does not appear that he performed any operations.

He left Oxford in 1660, perhaps as a direct result of the Restoration, for, although his father suffered in the Royalist cause, his personal friends must have been of the modified Republican type, who were in residence during the Commonwealth. Casting about for a profession, it is clear that he was sorely tried to decide between the Church and physic. He took orders in 1660, and his note-books for this year contain numerous divinity notes and sermons. In 1661 he was in London attending lectures on anatomy at the Barber Surgeons' Hall in Monkwell-street, and debating in his own mind whether he should obtain a bishop's licence to practise medicine or an M.D. from a foreign university. He also interviewed "Mr. Giles, of Lincoln's Inn, who deals in spiritual livings." He thought first of Brentford, then of Kingston-on-Thames, where his friend, Dr. Bate, the Puritan doctor, is buried, and finally got himself instituted in 1662 to the vicarage of Stratford-on-Avon in succession to Alexander Beane, who had held the living since 1648. Beane was ejected at the Restoration, but his congregation built him a church in the town, and the Congregational Church in Rother-street is still known as the "Church of the Ejectment." The presentation to the living was in the hands of the King, but before 1681, when Josiah Simcox, A.M., became vicar, it had passed into the hands of Charles, Earl of Dorset and Middlesex.

Ward held the living until his death on Sept. 12th, 1681. He was buried in the chancel near the north wall, and the following inscription was placed on a flat stone: "Hic jacet Joh. Ward, A.M., Sprattoniæ, Northampt., natus, hujus Ecclesiæ Vicarius per annos XIX. denatus fuit XII. die Septembris, Anno Domini MDCLXXXI., ætatis suæ LII." The stone disappeared when the church was repaved in 1840, but the inscription was copied and the place of burial was recorded by the Rev. James Davenport, who was vicar from 1787–1842. I have little doubt that he was ruptured and that he died of phthisis. Of his domestic relations nothing is known, but as his will makes no mention of wife or child, it is probable that he never married.

THE REVIVAL OF SCIENCE IN WARD'S TIME.

A valuable feature of Ward's note-books is the insight which they give into the mental pursuits of the Oxford graduates during one of the most stimulating periods of the University's long career, an insight which is the more valuable because little is known of it except through the crabbed Life of Antony Wood. The note-books give an unvarnished and wholly personal account of the things which were uppermost in the minds of those who "sate at our table in Christ Church" by one who entered heart and soul not only into the new-born scientific spirit of the time but into the literary and social life. The books he read, the stories he heard, and the practice he saw, are all faithfully recorded. He shows himself throughout as a well-read gentleman, as insatiably curious as "the elephant's child," quite clear and decided in his opinions, which are founded on observed facts and not on theories, and yet curiously credulous to our eyes, for as yet science was in its infancy, there was no chemistry, no pathology, and medicine was still mediæval in character.

The stern realities of the Civil War, the military occupation of the city, the dispossession of the Royalist Fellows, and the introduction of Independents had finally displaced the authority of the schoolmen and put aside theological controversy. The undergraduates and the younger Bachelors and Masters were more interested in facts gained by observation and experiment than in the disputations and rhetorical displays which had pleased their fathers. Oxford was at the beginning of one of the great periods of awakened interest in natural science such as had occurred in the twelfth century during the lifetime of Roger Bacon and during the last quarter of the nineteenth century within our own memory. With the authors of this revival Ward was contemporary, and with many of them he was on terms of friendship.

The seventeenth-century revival of science led to the foundation in 1645 of the Philosophical College, which held its meetings at the lodgings of Dr. Jonathan Goddard in Wood-street, Cheapside. This was followed by the "Invisible College," or "learned Junto," which met at Wadham College when Dr. Wilkins was Warden and Dr. Goddard had succeeded William Harvey as Warden of Merton. The Invisible College contained the germ of the Royal Society, of whose foundation Ward says:—

> I have heard this guesst abt as ye ground of founding ye Royal Societie. The King well knew yt Harrington who wrote Oceana and such strange fellows as have had their discourses and meetings and have talked of a Commonwealth; whereuppon he instituted another societie, whereof his Royal Self vouchsafed to bee one, in opposition to itt, not thinking fitt to put down ye other by open contradiction.

The leaders of the scientific revival were nearly all Oxford graduates, though some of the most illustrious, like Wallis and Scarburgh, were only sons by adoption, for they had been incorporated from Cambridge. Most of the founders of the Royal Society were in residence with John Ward, who was born, as you will remember, in 1629, entered Christ Church in 1646 or 1647, and took his M.A. degree in 1652. Dr. Bathurst, of Trinity College, with whom Harvey spent many hours observing the changes in incubated hens' eggs, was nine years older than Ward. Dr. Willis, born in 1621, was eight years older. He entered Christ Church in 1636–37 and practiced in a house just opposite Merton. Robert Boyle, the greatest dilettante of the set, was born in 1626, and was living in Oxford at the house of Mr. Crosse, the apothecary in the High-street adjoining University College, in 1654. Richard Lower, born in 1631, entered Christ Church with a scholarship from Westminster in 1649. Christopher Wren, born in 1632, matriculated from Wadham in 1649–50 after he had acted for a time as prosector to Dr. Charles Scarburgh. Dr. Wallis, Glisson's first pupil and the friend of Samuel Pepys, came into residence at Exeter College as Savilian professor of mathematics in 1649.

This list of names, incomplete as it is, shows how inspiring must have been the atmosphere to a youth like John Ward, who had a strong inclination towards medicine and science, though he eventually entered the Church. While he was at Oxford Wilkins was considering the problem of perpetual motion; Harvey and Bathurst the development of the chick; Wallis the circulation of the blood; Willis and Lower anatomy in relation to the brain and heart; Barlow

of the Bodleian, oriental languages; Bobart, botany, and especially the movements of the sensitive plant. Ward notes of him: "Bobart ye physick gardiner has had a feavour in 1660 and after itt his hands and his feet peeled, his very flesh came off." All were interested in chemistry, which was as yet little more than alchemy, whilst physiology had hardly made any headway, for Mayow (1643–78), the gifted Cornishman whose early death was so great a loss, had not yet come to Oxford; Boyle was advancing physics; Goddard was doing something to make medicine scientific, but pathology was non-existent and physic was little more than folk-medicine.

EXTRACTS FROM THE NOTE-BOOKS.

The first volume of the commonplace books begins, "John Ward his booke, 1648 An. Dom, Aug. 26," about a year and a half after he had entered the University, and when he was 19 years of age. It contains an abstract of Sir Philip Sidney's "Arcadia," interspersed with extracts from Sir Thomas Browne's "Religio Medici." Perhaps some indication of his politics at this time is given in the statement that "Parliaments are good physic but ill meat." He next read "Tite Andronico," a novel full of sentiment if it may be judged by the sentences he selects that "shee was grown sick of a surfeit of health," and "poured soe full and fast compliments uppon him that stifled therewith he could make no answer in return but stood in a swound of amazement." And in another place: "The teares trickled down his reverend cheeks as if they had run a race which of them should be foremost," whilst "he went out as a Lamp for lack of oil, no warning groan was sighed forth to take his last farewell, but hee smiled himself into a Corps."

Having finished this novel he started on Sir Walter Raleigh's "History of the World," but the extracts are not numerous, and he very soon gave it up for "The Unfortunate Politick," a story of Herod and Mariamne, which was of the same sickly sentimental type as the other romances. He quotes as a part of it, "Seeing him now at the brink of the grave he flings himself in, expelling by brutish violence that soul which he was ready to surrender up to nature."

LECTURES IN MEDICINE: THE PULSE; PURGATIVES.

The book being finished, he returns to history, more especially the History of the Persian Wars, and a few pages later on there are notes of a lecture in Latin on medicine, the subjects being pleurisy, the urine, and menstruation. Other lecture notes deal with the pulse and with the uses and actions of purgatives. Harvey had not yet come to Oxford, and the Regius Professor of Physic does not appear to have accepted his views. He stated boldly that:—

A pulsibus diagnoscuntur statûs vitales. In pulsibus, prout in corde, duo sunt motûs contrarii scilicet systole et diastole. [The vital conditions are diagnosed from the pulses. There are two contrary movements in the pulses as in the heart, namely, systole and diastole.]

The teaching in regard to purgatives took the following form in Ward's notes:—

The causes of purging medicines: (1) Extreme bitter as in Aloes and Colloquinta [Colocynth]; (2) Loathsome and horrible taste as Agarick and black hellebore; (3) by secret malignity many times not appearing in the taste as Scammony and Antimony: and if anything purge which hath not one of these 2 former virtues in it, it is to be suspected for poison.

The lecturer then proceeded to say that quantity was an element in the purging capacity, for

if we drink a great quantity of new milk it purgeth; that a mordication or vellitation of the orifice of the veins especially of the Mesentery veins: that almost all purges cause a kind of twitching and if it be in a high degree it is little better than poison which works by corrosion. The seventh cause of purging is attraction, for purging medicines have in them a direct force of attraction as drawing plaisters have in surgery. So Betony bruised and put into the nose draweth phlegm and water from the head. Those medicines that draw quick draw the fluid humors, those that draw slow work upon the viscous humours. Flatuosity is another cause of purging for wind stirred moveth to expell. Most purges lose their virtue by decoction upon the fire and for that cause they are chiefly infusion, juice or powder.

I have given the headings of this lecture as they stand, because it is evidence of the state of medicine in the University before the revival of science at Oxford.

WARD BECOMES M.A.: NATURE OF HIS STUDIES.

The second volume begins on May 27th, 1652, and opens with the exercise for the M.A. degree. The thesis was "An æstate an hieme plura sunt oblectamenta. Affirmatur quod æstate" [Whether the delights of summer or winter are the more numerous. It is decided in favour of summer]. The exercise would have taken about ten minutes to read. It ends sententiously with "Dixi," I have spoken. It is interesting as an example of the Austin disputation which preceded admission to the degree of M.A. Such a disputation or exercise was performed by every Bachelor of Arts once a year unless he had obtained a dispensation. It was held on any Saturday in term time between the hours of 1 and 3 o'clock in the choir of St. Mary's (the University Church) and was presided over by the masters of the school who received either a drachma (4*d.*?) or a pair of gloves as a fee. Three days' notice was given by affixing the subject of the disputation and the names of the disputants to the doors of St. Mary's Church.

The note-books give no further indication that Ward continued to read romances. They are filled with notes on more serious subjects as soon as he had taken his M.A. degree. After several pages devoted to divinity, to civil and to ecclesiastical law, he returns to natural science as it represented itself to him in alchemical speculations on antimony and mercury. There was still considerable belief in astrology. The philosopher's stone and aurum potabile were still the subjects of serious experimental work and led to the foundation of modern chemistry. The extracts on alchemy are "Ex Angelo Salâ." His botany he learnt from Bobart, the keeper of the Physic Garden in Oxford, by the delightful practice of "simpling," which meant pleasant summer days spent in walking to Shotover and Forest Hill, or afternoons in the Physic Garden itself. Anatomy he studied in "Briggs, his Anatomia"; physic in Ramondæus translated by Tomlinson; surgery in Paræus rendered into English by Johnson. Incidentally he mentions a case of hysterectomy. "Dr. Witherburne in London took out ye womb of a woman." Measles was raging at the time, for he records that the physicians say "the disease is autogenous like the plague; that the fever is less when the rash is coming out than afterwards, and that the backache before the appearance of the rash in measles is due to an excess of blood in the vena cava."

BOTANY.

Of Bobart, or Jacob as he always calls him, Ward has many reminiscences, chiefly during the year 1661. There were two Jacob Bobarts, father and son, both Horti Botanici Custodes. Ward must have known both intimately, but it is Jacob Bobart the elder [1599–1680] who taught him botany. He was born at Brunswick and was appointed superintendent of the Oxford Physic Garden on its foundation by the Earl of Danby in 1632. In 1648 he published a catalogue of 1600 plants under his care, and this was revised in 1658 in conjunction with his son. The revision, no doubt, was itself being revised when Ward knew him, and it explains his references to Gerard and Tomlinson. Ward's references enlarge our knowledge of the man who must have been one of those characters for which each generation at Oxford has been celebrated. We are told that "on rejoicing days he used to have his beard tagged with silver" and that a goat followed him instead of a dog. One of the earliest entries is:—

"Five sorts of fritillaries Jacob saies they have in ye Garden. Wee saw ym in flour March ye 23 1661 in ye Garden." "The 28 March 1661 wee went to Shotover to find Lunaria by Jacob's directions but found none." "I was uppon New College wall on ye 17 April 1661 to find Ruta muraria but could find none; but much diastrum nigrum was there." "A great piece of horse chestnut. Remember yt I get a cup made of itt." "Jacob found a chestnut tree wild near Newburie and many hee hath seen growing in Sion College garden wch brought chestnuts to perfection." "Rochet seed scarce to be got. Jacob saies hee had itt not, nor scarce ever saw itt." "Jacob hath a very proper orchis wch resembles a Bee wch I saw May ye 4 1661." "That Sedum in Bobart's house hath grown up these 8 years only by taking of ye cloth now and then and anointing itt with oil once a quarter and soe putting itt on againe." "May ye 9 An° Domini 1661 att ye Physic Garden Jacob told mee there is a gentleman in Worcestershire who hath made very considerable progres in altering flowers artificially, hee knows not his name." "Rhubarb now may bee bought for about 16*s.*

or 18s. ye pound." "Bobart had a Bunch of Grapes once ripe on ye 5 August wch hee presented to ye Swedish Embassador, then att Oxford. Hee brags much of itt still, they usually not soe till ye latter end of August or ye beginning of September." "Jacob says hee thinks Parkinson hath 500 plants more than Gerard; only Gerard's paper is better and his cutts better, they being dulled ere they came into his hands." "Jacob Bobart spake with Dr. Modesay and says of him, ye whole world yields not ye like man: hee never heard any man talk att yt gallant rate in his life: hee showed ym all his designs in ye new Garden. There are to bee walks in itt of thirtie feet wide as hee saies."

ANATOMY AND PHYSIOLOGY.

There is an interesting note written in the year 1652 which is valuable, as it affords a test of Ward's accuracy in reporting what he heard. It is interesting because I imagine it formed a part of the talk at the M.A. table in Christ Church Hall, "our table," as Ward calls it, on some afternoon when Glisson had paid a flying visit to Oxford. You will remember that Glisson was one of the original members of the Royal Society, that he was Regius Professor of Physic at Cambridge and a graduate of the University of Oxford; that he first wrote on Rickets and afterwards on the Liver, the capsule of which is still called by his name. A disciple of Harvey, he was "omnium anatomicorum exactissimus." Of him Ward wrote:—

Asserit Glissonius fuisse Jolivium quendam sibi amicum qui affirmavit dari 4tum genus vasorum distinctorum ab arteriis venis et nervis ut in toto corpore communicationem cujus munus esse aquosam humorem continuo in toto corpore distribuēre.

Glisson says that Jolivius, one of his friends, stated that there was a fourth kind of vessel distinct from the arteries, veins, and nerves, so connected throughout the whole body that their function was to distribute a watery humour through the whole body.

In 1654, two years after Ward had recorded the story, Glisson published his book "Anatomia Hepatis," in which the following passage occurs. He is writing of the Lymphatics of the Liver:—

Incidi primum in eorum notitiam indicio D. Jolivii idque anno 1652 sub initium Junii: quo tempore ille Doctoratus gradus adapturus, me Cantabrigiæ in eum finem convenerat. Asseruit nempe dari vasorum 4tum genus, a venis, arteriis nervisque plane diversam idemque ad omnes aut plurimas saltem corporis partes distribui et humorem aquosam in se complecti.

My attention was first drawn to them by Mr. Jolivius about the end of June in the year 1652, at which time he was incorporated to the degree of Doctor when I was at Cambridge, and he came to me for that purpose. He stated, forsooth, that there was a fourth kind of vessel clearly distinct from the veins, arteries, and nerves, and that these vessels were distributed to all, or at any rate to most of the parts of the body, and contained a watery humour.

This observation seems to have borne good fruit, for Ward made some original observations and bought himself a microscope. In 1658 he records that:—

Dr. Willis and Dick Lower opened a Dogg and they first let him blood in the jugulars to discover whether arterial and venal blood did differ in colour and constitution. Mr. Ffrancis told me that he and Dick Lower found much chyle extravasated.

Dick Lower was Richard Lower, whose name is still familiar in "the tubercle of Lower." He was one of the most gifted of the younger generation at Oxford to which Ward himself belonged. Born in 1631 he entered Christ Church in 1649 and took his degree two years later than Ward. He studied medicine under Willis—the circle of Willis—and assisted his master in the dissections of the brain and nerves which have rendered his name immortal. Lower was especially interested in the movement and colour of the blood and of the chyle. Later in life he lost a good deal of practice owing to his Whig tendencies, but as he left £1000 to St. Bartholomew's Hospital he must have done well.

Original Scientific Investigations.

Lower exercised a singular fascination upon Ward and it is clear that he assisted in some at least of his investigations in a truly scientific spirit. Here are some illustrations taken at random.

"Dick Lower is answering ye fellow that writes against Willis." "Remember to buy Dr. Willis 'De Cerebro' for one book and ye fellow's that wrote against Dr. Willis for another." [This no doubt was Edmund O'Meara's work against Dr. Willis' work on fevers.] "Remember in all my dissections to aim at ye discoverie of a passage betwixt ye stomach and bladder." "I look upon ye blood as all other bodies to consist of three parts, ye thickest part which is first strained away in ye spleen, by ye arteries, ye thicker next that is strained off in ye liver, and ye thinest of all after that in ye bodie or ye kidneys. These certainly are ye use of these 3 parts, though Highmore makes ye spleen to be a kind of a focus [furnace?] to ye stomach to impart heat to it, and ye very consistence or hardness and porosities of whose part does argue as much."

There are several other references to the spleen and its uses, so that Ward had this organ under consideration for a long time. Thus, at one time he was asking himself—

Whether when there is a redundance of ferment in ye stomach and spleen this ferment may not passe along with ye aliment and in several parts, especially ye joints, may not be laid aside again and so cause ye gout.

And again—

Whether ye spleen borrows its ferment from the stomach or the stomach from it: Qy. whether a too much ferment in ye stomach is not ye true cause of ye cardialgia together with wind and some other things.

Such theories were probably inspired by Dr. Willis, but the practical influence of Lower can be seen in—

Things to be inquired into in dissecting Mr. Toone's dogg: at first whether his spleen is any whit grown again since it was taken out; 2ndly whether its dulishness does not proceed from ye ill crasis of his blood not being duly fermented and heightened by ye fermentation of ye spleen.

In another instance he notes that—

A dog's spleen taken out by Mr. Day, afterwards ye same spleen and ye dog was stole by Mr. Hartford and brought up to London and there dissected.

Other evidence of experimental work in a scientific spirit is seen in the statements that—

"The recurrent nerves in a dog's neck being cut ye dog afterwards could not bark." "Mr. Lower cut a dogges windpipe and let him run about. Hee had a week so hee could not smell, but would eat anything as I am told." "When one would discover ye ductus chyliferus of Pecquet presse ye Mesenterie somewhat hard and a thinne pellucid liquor will come out at ye top." "The nerves have their original rather from ye cerebellum or medulla oblongata cerebri than from any other part." "Inquire whether there is any such thing as a woman having a suture down her forehead as people commonly report. I searched 34 skulls or thereabouts and of these all, I found but 4 wch had a suture downe ye forehead to ye very nose: another wch seemed to have a squamiferous suture upon ye vertex and which I admired much att. I suppose nature does vary in such things and I wish I could discover something of her operations, especially whether epileptick persons have any sutures."

An equally good piece of original work, putting theory to the test of experiment, also due to Lower's influence—for he afterwards published a work on the subject—is the following:—

"View ye blood of all animals as to its thickness or thinness; yt of Turkies seems to me to be very thick." "Turkey's blood again a 2nd time observed and found to be thick immediately after its being out, wch well might bee in regard of its fulness of spirits wch soon flies away and so leaves ye masse very thick, or whether ye blood naturally is thicker yn that of other animals. Remember to kill a turkey and another fowl together and observe wch blood soonest coagulates."

MEDICINE AND PHYSICIANS.

The extracts relating to medicine and physicians are numerous, and show that practice had not advanced, and was not being investigated in the same way as anatomy and physiology. Symptoms, of course, were alone treated, and often by a nostrum.

"Dr. Wagstaff hath a water made of Roman vitriol and plantain water. He calls it aq. cœrulea." "Dr. Wagstaff uses Mastick pills very much and amongst them oil of aniseed for the stone." "Mrs. Woolmer having a great weakness one time when she lay in, Dr. Wagstaffe applied cantharides to blister the inside of her foot and so draw, and drew three days untill letting out ye blister. At last she had a sore in ye place and a Lameness which she could never recover afterwards. She hath since had a numbness or palsie on one side of her head and bodie, but it hath passed away presently without any considerable matter of damage." "Inquire of Mrs. Woolmer whether ye numbness

she complains of is on ye side where ye blisters were used and again advise her to keep open her issue in the other leg and stop it up in that which hath ye sore running in it." A good many years later "Mrs. Woolmer had a tympanie. Att last it inclined to breaking and rose to a head about her navel and one day she runne a pinne into itt and itt streamed out extremely. Her advice with Mr. Hall, who wished her to lie on her back and let it out by degrees, after they got a tapp. A quarter of a year, with much stench and filth, after yt closed up and well." "Dr. Wagstaffe calls Laudanum extractum hypnoticum and extractum cordiale."

Ward died a bachelor, but he seems from the following extract to have learnt something of the wiles of women :—

Dr. Wagstaffe's daughters have a cosmeticke wch would make ye skinne peel off a little and after they lookt very fair: only they kept in every time they used it about 2 or 3 dayes: and once in 6 months they used it.

As an illustration of the methods of contemporary practice he states :—

Dr. Willis imparts his receipts chiefly to 2 Apothecaries in Oxford so farre as I can perceive, Mr. Hazlewood and Mr. Crosse. Hee hath a syrup of sulphur wch hee makes much use of. Itt is his owne composition and no Apothecarie hath itt or knowes itt but ye two forementioned. Itt may be taken and is so usually with a Liquorish stick. It is a compound not above 4*d*. an ounce, but it is most used in Colds and distempers of the Lungs.

Two ounces and a half of quicksilver given by Dr. Conyers to a patient yt was troubled with ye Iliack passion. Itt is very good for yt distemper. Dr. Willis uses to give more: ye more you give ye less is ye danger. Itt does by its own weight passe quickly. Doe but mix itt with a plaister and heat itt a little and presently itt flies away, but boyling hurts itt not at all.

Dr. Conyers, born 1622, was educated at Merchant Taylors' School, was a Fellow of St. John's College, and took the degree of M.D. at Oxford in 1653. He was one of the few physicians who remained in London during the Great Plague, says Munk, and fell a sacrifice to it. Of Dr. Conyers, Ward also says: "Hee uses nothing else almost but his emetick powders," and that "he knows some families yt for many years, they say some hundreds, have not had ye pocks: and soe it is not in ye blood of ye mother."

References to Sydenham, Willis, and Ent.

There is a short reference to Sydenham in the passage—

There was a great phlogosis in ye Duke of Cambridge his bowels. Dr. Sydenham kept ye Duke of Cambridge alive 3 weeks and the Dutchess thought hee would really have cured him. Hee did itt by some cooling water or other wch hath got him some credit. Hee was allso with Sir Richard Bishop for his gout but did little except pultisse him with milk and crumb of bread. He advised Mr. Bishop to fast one day in a week for his rheumatismus so as yt humour would spend ittself.

Of Dr. Willis he says :—

My Lady Windsor is dead: her brain was good as Dr. Willis said, but her liver was rotten and corrupt much. Dr. Willis lays much store uppon ye brain nowadays.

The relationship of Willis to Lower is well shown in the fact that—

"Dr. Lower found out ye famous well near King's Sutton though hee was willing itt should goe under Dr. Willis his name." "Dr. Willis hath got a new way of opening ye Brains, as to cut them on all parts from what holds them and so to turn them upside down."

Of Willis, too, he tells the following story :—

Stephen Toon's rupture was laid open, as ye phrase is, and caused a peristaltic motion of ye guts. At last eased by a plaister and a grain of laudanum wch Dr. Willis said hee was too weak to take, the Dr. left him with these words: "Stephen, God comfort thee."

Stephen Toone did not die of his rupture. He was the apothecary with whom Ward lodged in Oxford. He was the son of Thurstan Toone of Collingborough, Northants, and was "Privilegiatus" 14th September, 1666, aged 30. His will was proved at Oxford 1st October, 1681. The teaching of Willis and Lower is again exemplified in the passage :—

Some Drs. especially in Oxford now are of opinion yt hystericall fitts are caused by ye indisposition of ye Brain. Most in Oxford, as Mr. Ffrancis said, are of yt opinion and that men have ye same thing which some women have, and that Mr. Elyot had a patient that hadde itt and was cured by anti-hystericall things though hee was a man. That there is no passage for fumes into ye Brain by way of valves.

Sir George Ent, the friend of Harvey, to whom we owe the publication of the "De Generatione," is mentioned more than once.

"I heard that Dr. Ent going to Warwick Castle, my Lord Brook having a man very sick of ye griping of ye gutts, My Lord asked ye Dr. what was good for itt. He answered white wine plentifully drank if itt was not too sharp would doe itt, hee would lay his life of itt." "Dr. Ent said to Mrs. Lucy one time when she was sick yt hee had intended to have let her blood, but afterwards perceiving shee had ye jaundice hee said hee would not for a hundred pound yt hee had done itt."

Dr. Bate and Scurvy-grass.

There are many references to Dr. Bate, whom Ward always calls Bates, of New College. He practised in and around Oxford, especially "among precise and puritanical people, he being then taken to be one of their number." He moved to London, was physician to the Charterhouse, and attended Cromwell in his last illness. At the Restoration he became physician to Charles II., and dying in 1669 was buried at Kingston-on-Thames. Ward says :—

I have heard that Dr. Bates writt few bills wherein hee did not prescribe scurvy grass, hence some have styled him in my hearing, as relating itt for others, ye Scurvigras Dr., imagining, I suppose, there might be a tang of itt in most diseases.

Anthony Wood (Life, i., 273) says that scurvie grass drink began to be frequently drunk in the mornings as a physic drink in March, 1659. Ward says, "Put a quart of scurvy grass all fresh to 3 gallons of ale, if strong put in more."

There is an account of Bate in *Longman's Magazine* for August, 1894, pp. 364–75. "Dr. Bates told Dr. Barke that he had used ragwort with scabby people in ye hospital for 40 years with good success." He might therefore have said, as did Dr. Ballard to Lady Peniston, "Madam, I could advise you to a chymical medicine wch should cost you 10 shillings, but I am a friend of what grows under a hedge." "Mr. Hodges of Gloucester was sick of a kind of pthysic and hee consulted Dr. Bates, who prescribed him first a kind of Almond milk, then a wash of oil of Almonds and after ye chewing of tobacco to make him vomit and this cured him cleverly. After ye eating of oil and hony much gravel came away from Mr. Hodges as appeared by his urine."

Dr. Dickenson and the Use of Antimony.

He records the following case, which was under the care of Dr. Dickenson, Linacre lecturer at Oxford and of Eton and Merton Colleges.

Mr. Gwinne of our house vomited up long pieces of blood wch had heads like fishes. They carried them to the Apothecaries and cut them but knew not what to make of them.

A few pages later comes the end of the case—

I saw Mr. Gwinne of our house dissected but could perceive nothing in him that might cause his death, his spleen was somewhat flaccid, so was his heart and one of his kidnies, but his lungs had some kind of scyrrhus in them and in these scirrhuses a sabulous kind of matter, but that could not kill him. They pretended hee had a contusion of the liver in regard ye concavity of it was a little stained or possibly itt was nothing else but a settling of ye blood when death came. There was a membrane coming from his side to his lungs on each side wch some ignorant people would have interpreted a growing of ye lungs to ye side, but Mr. Boghill said he had seen it severall times in sound men yt hee had opened. His heart was large, about as large as ye heart of an ox but not perisht at all.

Edmund Gwynne, "serviens," matriculated from Christ Church on July 25th, 1655. The post-mortem examination shows that he had suffered from a tuberculous pleurisy with a dilated right heart, and the long pieces of blood may have been formed in a dilated bronchus. "Mr. Gwinne of our house" was under the care of Dr. Dickenson, the physician who tried to prove that the Greeks borrowed the story of the Pythian Apollo and all that rendered the oracle of Delphi famous from Scripture and especially from the Book of Joshua. Dr. Sheldon thought so highly of his work that he recommended its author to devote himself to divinity and take orders. Dickenson preferred, however, to study chemistry, a subject in which he soon became *facile princeps*. After practising in the High-street, Oxford, he moved to London and became physician in ordinary to Charles II. and afterwards to James II. Troubled by old age and stone in the bladder, he died in 1707, and is buried in St. Martin's-in-the-Fields.

Ward records in another passage that—

"Antimonie:—Mr. Boghill made a balsam of itt wch hee gave to one whose lunges were distempered with excellent success. Hee spake with a great chymist who said if one could take away ye vomiting part of itt and make itt a medicine purely purging downward itt would be a great thing; now Crosse said Dr. Dickenson gave a Lady a pill wch worked 20 times without making her sick and hee told mee confidently yt there was nothing but Antimonie in itt. Hee highly commends Dr. Dickenson for his strong pains taken in prosecuting of itt, and says that certainly hee hath admirable remedies." "Mr. Boghill hath his elaboratories about Chelsey."

Boyle, it will be remembered, lodged with Crosse the apothecary in the High-street, Oxford. Of Turner Ward tells "a merrie storie," "Dr. Turner being to bee examined by ye College for his admission thereto ye young Dr yt examined him askt him how many chapters there were in such a book of Galen? Hee made answer yt he had read Galen before he was divided into chapters." This Dr. Turner was probably John, a Doctor of Medicine of Leyden, who was admitted a Licentiate of the Royal College of Physicians on June 4th, 1630.

"Mr. Topham of Christ Church if hee sat at disputations with his hat off hee used to pisse blood." This was, I suppose, a case of paroxysmal hæmoglobinuria, the attack being precipitated by a chill. Mr. Topham was Richard Topham, B.A., incorporated from Trinity Hall, Cambridge, on Dec. 6th, 1652. He took the degree of M.A. from Christ Church on Dec. 11th, 1652.

SURGERY.

Ward kept himself abreast of the surgery of his day, for he says: "Remember to bring Woodal's Chirurgerie, he was a rare fellow in his time doubtless." This was John Woodall, surgeon to the East India Company and author of the "Viaticum or Pathway to the Surgeon's Chest" as well as "The Surgeons' Mate"—the two text-books of naval surgery for many years. "Remember to purchase as soon as possible Pareus his chirurgerie and Mr. Woodall and in the meantime to borrow Woodal of some of my parish." Paré, translated by Johnson, was published as a second edition in 1649. Ward also supplied himself with surgical instruments, as is seen in the note: "Remember to get a speculum oris and other instruments fit for chirurgerie when I goe to London and a great case to hold them." He did not aspire to a great armamentarium, for—

"I saw one day all Gill's instruments and hee told mee ye names of ym all and their use and what ye whole case cost him: hee wanted a small spoon and some other things in ye case: yt and his Launcets and his syringe and his salvatorie were all ye necessarie tools of a chirurgion." "Gill said yt Mr. Day hath amputated 5 armes, 3 legges and somewhat else since hee came to him and but 1 of all these died and hee was a person of 60 years at leaste." "There are two of ye Molines in London. Ye one Edward ye eldest is excellent at stone-cutting and curing of fistula in ano or Lachrymale; ye other Gill told mee is ye better chirurgion. Hee told mee very many pretty stories of his exquisiteness in dissecting bodies wch hee saw admirably performed, taking out ye muscles and letting ym only hang by ye tendons by wch they were inserted. Mr. Moline hath a great many excellent cutts and pictures of ye liver and other inward parts."

Some Surgical Cases.

He gives a graphic account of the surgical treatment of the time:—

A man coming out of a bed by chance jabbing his bare breech down on ye side of ye bed a needle ran up his breech just by his anus. Hee sent for a surgeon of Abbington to pull it out and hee catching hold of itt with his forceps but not being able to hold itt but itt slipped and afterwards attempting itt hee thrust itt in further within ye cuticula. After wch Mr. Smith, an Oxford Chirurgian, was sent for; but ye fellow had made an incision and cut ye hæmorrhoidal veins wch bled abundantly att wch ye fellow, being discouraged, threw down his instruments and ranne away leaving him bleeding. They got a woman in ye town to dress him. Smith could see no signe but went and made a great incision 2 inches deep in ye Menbrana adiposa and thrust in his finger and turned itt about and felt it; then getting an instrument under hee drew itt out cleverly and gave itt him. Ye fellow when he sawe itt, tooke him in his arms and kisst him and made exceeding much of itt. Hee made not his incision betuixt ye needle and ye anus as did ye other fellow but on ye outside and so no danger of ye sphincter.

Abingdon is a good seven miles from Oxford, so that, by the time the double journey had been accomplished, to get Surgeon Smith to the patient some hours must have elapsed. Mr. Smith, the Oxford surgeon, also appears in the following passage:—

A way to stop a flux of blood. Take long needles and take up ye flesh first on one side ye vessel, yn beyond on ye other side and soe drawe ye flesh over itt and itt stopps. But itt seems an odd kind of way, tried by Smith ye Oxford Chirurgion in one, but hee died.

A Case of Tumour of the Breast.

Here is the treatment of tumour of the breast:—

A cancer in Mrs. Townsend's Breast of Alverston taken off by 2 surgeons the one's name was Clark of Bridgnorth, another's was Leach of Sturbridg. First they cutt ye skinne cross and laid itt back; yn they workt their hands in ytt one above and ye other below and so till their hands mett and so brought it out. They had their needles and waxt threads ready but never used them, and allso their cauterising irons, but they used them not. Shee lost not above ʒvi of blood in all. Dr. Needham coming too late staied ye next day to see it opened. Hee said itt was a Meliceris and not a perfect cancer, but it would have been one quickly. There came out a flow of a great quantity of waterish substance as much as would fill a flaggon. When they had done they cutt off one one bitt and another another. Put a glass of wine in and some lint and so let itt alone till next day. Yn they opened itt again and injected Myrrhe, Aloes, and such things as resiste putrefaction and so bound itt up again. Every time they dressed itt they cutt off something of ye cancer yt was left behind. Ye chirugions were for applying caustick, but Dr. Needham said "No, not till ye last, since she could endure ye knife." They prepared her bodie somewhat, yn let her blood ye day before. She endured it with infinite patience all along, not offering to lay her hand uppon itt to ease itt, but a warme cloth to ye other breast all ye time.

One of the chyrurgeans told her afterwards that shee had indured soe much yt hee would have lost his life ere he would have suffered ye like; and ye Dr. said hee had read yt woman would indure more yn man, but did not beleeve itt till yn. The way how and where itt should be cutt away was markt out with Ink by one Dr. Edwards, who lives at Bridgnorth. Mrs. Townsend likt him very well. Hee said iff they could prevent a Gangræna there was little fear, but it might be a cure iff she fell not into a feavour.

The extract is interesting as showing how completely the surgeon was subordinate to the physician. The case was clearly one of Brodie's tumours of the breast, so that Dr. Needham was correct in saying it was not a true cancer. Caspar Needham, of Peterhouse, Cambridge, took his M.A. in 1648, and then went to Oxford for the sake of the public library, and was incorporated 1655. He was one of the early Fellows of the Royal Society, and died at the age of 57 in 1679. He is buried in St. Bride's, Fleet-street, but nothing more is known of him. Dr. Edwards was Richard Edwards, of Bridgnorth, who was admitted an extra-Licentiate of the Royal College of Physicians on Dec. 19th, 1662.

There is a good instance of a long-standing pathological error in the next note about a patient who clearly had tetanus.

A worme in ye Gutts caused such a convulsive motion in one yt hee carried his heels and his head violently backwards, and so carrying his bodie into a roundness tumbled up and down with groaning.

WARD'S MEDICAL OBSERVATIONS AND SACERDOTAL DUTIES.

Ward must have had a singularly bad memory, for sandwiched between these details are such entries as, "Remember to excommunicate ye 2 persons yt committed Adulterie: ye woman yt turned Catholick: and to (warn) drunkards and ye like." The warning seems to have taken the form of a sermon, for a few lines farther on he says, "Remember to preach on 35 Jeremiah 14, 15, and to prove yt man is readie to obey man rather yn to obey God." The text is:—

The words of Jonadab the son of Rechab, that he commanded his sons not to drink wine, are performed; for unto this day they drink none, but obey their father's commandment: notwithstanding I have spoken to you, rising early and speaking; but ye hearkened not unto me.

I have sent also unto you all my servants the prophets, rising up early and sending them, saying, Return ye now every man from his evil way, and amend your doings, and go not after other gods to serve them, and ye shall dwell in the land which I have given to you and your fathers: but ye have not inclined your ear, nor hearkened unto me.

Sometimes it would seem that his medical observations must have interfered with his sacerdotal functions, or at any rate that his attention was divided, for—

"A woman yt died in childbed. I saw her just before shee departed. Shee was much troubled with convulsive motions wch are twichings of the heart just before her expiring." "Full-chested people are long a-dying as was observed in Mrs. Williamson ..... and such people as they are long in dying so are they long likewise ere they come to die." "Remember to write to Mr. ffrancis for a reason why a blow under the ear kills so suddenly rather yn in another part." "One used to say of his patients that when they were ill they are saints and when they are well they are devils."

HUMOROUS STORIES.—FOLK-MEDICINE.

He was fond of good stories, thus: "One seeing Dr. Bailey goe by a shop in Oxford said instantly, 'Why, there goes ye Dean of Swarum instead of ye Dean of Sarum.'" Dr. Richard Baylie matriculated as a plebeian from St. John's College July 3rd, 1601, aged 15; D.D. July 16th, 1633; President 1632; expelled 1648; restored 1660. Chaplain to King Charles I. and Laud; Archdeacon of Nottingham 1628; Dean of Salisbury 1635; died 1667. The extract throws a light on the Dean's language.

One having to say something in the close of a funeral sermon in commendation of ye person deceased he began itt thus: "It is an old saying De mortuis nil nisi verum. It was Mr. Doolie's brother of Alverston at ye death of our Mr. Lane who lived in Mr. Bishop's house."

Dr. Prideaux said of ye man in ye Gospel yt made excuse because hee had married a wife: says hee, What a fool was hee not to bring his wife with him for yn he had been ye more welcome.

Remember when I goe to London to buy Gusman and Jacobus de Voragine and some other such merrie authors to peruse in winter nights and keep up cheerful innocent mirth.

My Lord Paget seeing a little bit of mutton in a great platter of pottage put off his doublet. Itt being askt what he intended to doe hee told them hee intended to swimme for ye bit of mutton. This I have heard.

Here and there pieces of folk-medicine are given, as:—

Children get ye Nephriticke disease by pissing in ye fire-place say nurses; and some say to pisse in a pot where some man hath pissed before is doing wrong, ye spirits without communicating with those within.

This appears to belong to the same class of superstition as the preservation of nail-parings and hair-clippings.

"Advise Mr. Benjamin Trapp to touch his swelling in his wrist with a dead man's hand wch may gett itt away." "For a person yt hath lost his stomach injoyn him every morning to eat a piece of Cheshire cheese strong of ye Rennet." "I have seen Cobwebs prescribed inwardly to be taken in conserves of red roses in a Bill (prescription) at Mch Potters, Nov. 28, 1658."

CONCLUSION.

I have entitled this Part I., as it only deals with the first six volumes of the MSS., and owing to pressure of work it has been impossible to make myself acquainted with the remaining ten. These six volumes I have transcribed myself; the rest have been abstracted by Mr. Bethell, your indefatigable Registrar. I hope in the future to deal with his work, for he tells me that it is full of interest; indeed, did time allow there is much that could have been added from the note-books I have read. They show us Ward as an epitome of his age, well read, quite clear in his opinions, with knowledge based on experiment, and yet with a naïve credulity which is surprising until we recall how little was known for certain and how much that is now certain had still to be learnt. His religion, so far as can be ascertained, dealt more with the broad aspect of truth and morality than with any speculative theology. His object was clearly to help his parishioners in their daily trials rather than to teach them the mysteries of the faith.

THE LATE MR. W. A. MEREDITH.—Mr. William Appleton Meredith, M.B., C.M.Edin., F.R.C.S.Eng., who met his death last week as the result of a fall from the skylight of his house at Little Massingham Manor, King's Lynn, was consulting surgeon to the Samaritan Free Hospital for Women in Marylebone-road, London. He was for thirty years on the active staff of this hospital, and published in our columns in 1897 the result of 250 operations for ovarian tumour. Mr. Meredith sat on the bench for the county of Norfolk. He was a native of New York naturalised in this country.

TRENCH FEVER:

A RELAPSING FEVER OCCURRING AMONG THE BRITISH TROOPS IN FRANCE AND SALONICA.[1]

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AFTER all examples of the well-defined acute fevers had been separated from the cases of fever occurring in the British armies in France and in Salonica a considerable number remained in which the diagnosis was doubtful. A few were probably due to infection with B. paratyphosus, or even B. typhosus, although all bacteriological examinations had proved negative; but I do not think that these should amount to more than 5 per cent. of the cases in which bacteriological confirmation is obtained. The cases left over are most frequently diagnosed as "pyrexia of unknown origin," influenza, and rheumatic fever, the first of these being the only diagnosis which is indisputably correct. A small number of cases of true influenza with the characteristic catarrhal and general symptoms undoubtedly occur, although an attempt is rarely made to confirm the diagnosis bacteriologically. Rheumatic fever is rare. Herringham only saw five cases in France between October, 1914, and October, 1915, though it subsequently became rather more common, and I only saw a single definite case in Salonica; in the few cases so diagnosed, in which the pain is really localised in the joints, the arthritis is almost always gonococcal and not rheumatic. We are thus left with a number of cases of pyrexia of unknown origin. In this paper two varieties of a well-defined febrile disease are described, which account for a considerable proportion of these cases.

In the early summer of 1915 Major J. H. P. Graham drew attention to a type of fever occurring in the British Army in France, in which two periods of pyrexia were separated by a normal interval. Similar cases were recognised with increasing frequency, and the disease soon became widely known as "trench fever." In November, 1915, Captain G. H. Hunt and Major A. C. Rankin described 30 cases of the same type of trench fever, and a still fuller account was published in February, 1916, by Captain J. W. McNee, Lieutenant A. Renshaw, and Captain E. H. Brunt, in which for the first time two distinct clinical types of the disease were distinguished.

The disease was only observed among officers and men living near the trenches and in the personnel of hospitals, especially among orderlies of wards in which there were patients suffering from the disease. No cases occurred among ammunition columns, ordnance and headquarters' troops. It was for this reason that the name "trench fever" was adopted, though actual residence in the trenches themselves was certainly not an essential factor, and Hunt and McNee in their most recent communication state that cases have recently been met with further from the front.

According to Colonel Sir Wilmot Herringham, literally thousands of cases of the first type occurred among the troops in France and Flanders between the end of April and October, 1915; it was comparatively rare in the following winter, but increased again in the spring of 1916. It did not occur in Gallipoli and was not definitely recognised in Salonica until April, 1916. The second type, which was rare in France and Flanders until November, 1915, when it became more common than the first, has been very prevalent in Salonica since December, 1915. At first cases had to be recorded as "P.U.O." (pyrexia of unknown origin) or under the head of "influenza" or some other equally incorrect name, even when their nature had been recognised. For this reason it became customary to call the disease "pyrexia of unknown origin (A)," or shortly "P.U.O. (A)," as this designation did not introduce into the official records an unauthorised name, such as "periodic one day fever" or "Salonica fever," which had been used by some medical officers. The term "trench fever" was not used, as, besides being an unauthorised name, the disease was

[1] Amplified from an address given to the Salonica Medical Society in April, 1916.

common in Salonica at a time when no men were living in the trenches, and cases occurred in ammunition columns several miles from the trenches as well as in front line troops and among hospital attendants. When, however, in March, 1916, we recognised that the disease was identical with the long form of trench fever described by McNee, Renshaw, and Brunt, and when a month later the common short form of trench fever seen in France and Flanders became prevalent in Salonica, it seemed wise to adopt this name.

A few cases with symptoms intermediate between the two types of trench fever have been observed in France and in Salonica, and the initial symptoms are very similar, but the temperature chart is so different in typical cases, and the second class occurred in such large numbers without the first in the winter months, although it was very rare in comparison with the first during the summer of 1915 in France, that it cannot yet be regarded as definitely proved that the two diseases are really due to the same infection, as is generally believed by British observers in France.

My attention was first drawn to the disease in Salonica at the beginning of January, 1916, by Lieutenant-Colonel D. J. McGavin, Major D. S. Wylie, and Major H. T. D. Acland, of No. 1 New Zealand Stationary Hospital. At first it was not widely recognised, but as medical officers became more familiar with its characteristics it became clear that it was extremely common, especially in certain units.

With the exception of one man, who contracted the disease whilst in hospital from another cause, all of the cases observed in Salonica up to March, 1916, belonged to divisions which had been several months in France. None had been in Gallipoli or Serbia. The short form of trench fever had occurred in several of the affected units whilst they were in France. It is highly probable that these divisions brought the infection with them. In March, 1916, the long form of trench fever began to occur in a division which had been in Serbia, but not in France. Some of the men had been in Gallipoli, but most had come straight to Salonica from England. In April groups of cases of both forms of trench fever appeared in units belonging to other divisions, which had been free from the disease since their arrival at the end of 1915. The later cases probably became infected by men coming in drafts from France. The disease also developed among the personnel of some of the hospitals to which the patients were sent. It does not appear to have been observed among French troops either in France or Salonica.

Early in 1916 cases of the first variety were observed in Austrian troops in the Tyrol, and cases of the second variety in a German field hospital on the Eastern front.

Pathology.

Before trench fever could be accepted as a clinical entity it was necessary to prove that it was not an aberrant form of some other condition, such as paratyphoid fever, which it may closely simulate during the first pyrexial period, true relapsing fever, which it resembles in so far as the fever is of a characteristic relapsing type, and malaria, which is sometimes simulated by the shorter and sharper pyrexial attacks. But the blood taken at the height of both the initial and the later febrile periods has always been sterile on cultivation, the Widal reaction has been consistently negative at every stage of the illness, and no spirochæte or malarial plasmodium has been found in spite of repeated examinations of blood films taken both during febrile and afebrile periods.

McNee and Renshaw found that trench fever could be transmitted to healthy soldiers by the intramuscular or intravenous injection of the blood of men suffering from the disease. Injection of the washed red corpuscles had the same effect, but the plasma and serum were not infective.

One attack does not seem to protect against reinfection. I saw a man with the long type of trench fever in April, 1916, in Salonica; he had been seen by Captain McNee in a typical attack in September, 1915, while in France, and had been quite well in the interval. It is possible, however, that there was no reinfection, the original infection having remained latent between the two attacks.

As all attempts to discover the infective organisms have failed and as no fatal case has occurred, the nature of the disease remains unknown. The striking periodic character of the fever in the long type of case, the considerable increase in the proportion of large mononuclear leucocytes which has been found on several occasions, and the evidence pointing to an intracorpuscular infection suggest a protozoal rather than a bacterial origin.

Method of Propagation.

There is no nasal, pharyngeal, or bronchial catarrh, and, except for constipation, gastro-intestinal symptoms, though occasionally well marked, are generally completely absent. It is probable, therefore, that the disease is not conveyed by the respiratory secreta or by the fæces, but through the intermediation of some insect. The occurrence of the long form of the disease during the winter months shows that the infection can be conveyed in the absence of mosquitoes and other flying insects; though Herringham found mosquitoes in France throughout the winter, there were certainly none in Salonica. Fleas have been scarce in both countries, and the men themselves rarely complain of them. Almost all patients admitted that they were lice-infested up to the time of their entry into hospital, so that it is quite possible that the disease is conveyed by lice. A hospital orderly, who had been free from lice since his arrival in Salonica, had to carry the kit of a number of new patients suffering from trench fever on May 2nd, 1916. The clothes were swarming with lice, and the same evening he found some in his own clothes. He got rid of them in the course of a few days, and on May 20th an attack of trench fever began. He was not employed in the wards and he never came in contact with any patients suffering from the disease. He was the first case of trench fever in the personnel of the hospital to which he was attached. The incidence of trench fever is least in the cleanest battalions and in the divisions which have the best facilities for bathing. In some units a successful campaign against lice has been immediately followed by a great diminution in the incidence of trench fever. As a result of the rigorous measures taken in Salonica the disease almost disappeared in the summer of 1916. Captain A. L. Urquhart developed the short form of trench fever after allowing the lice from a patient with this form of the disease to bite him, and Captain McNee tells me that his observations in France have led him to agree with the conclusion I came to in Salonica—that the disease is spread by lice.

Cold, wet, and fatigue appear to be exciting causes in a man who has become infected, but has so far had no symptoms; thus Captain Hay noticed that in almost all cases in his regiment in Salonica the fever began two or three days after the patient had been wet through. In several instances a group of men sleeping in the same tent have been affected.

Some patients appear to be carriers, who do not lose the infection completely for several months, but have recurrences from time to time, during each of which they may infect an additional number of men. A sergeant, who had been in good health whilst in France between December, 1914, and November, 1915, developed the long form of trench fever early in December, 1915, directly after he left France for Salonica; in the following four months he was in hospital five times for a week or more, though he was perfectly well in the intervals. Every time he returned to his unit he became lice-infested again and appeared to infect some of the men with whom he came in contact, about forty men of his company, including six sergeants, having been taken ill with trench fever between January and March; one of the sergeants had wrestled with him, another had danced with him, a corporal slept next to him, and a private sat next to him for some lectures.

Incubation Period.

As a result of observations in Salonica on cases arising in hospital when a patient had been admitted for some other condition, I came to the conclusion that the incubation period is between 15 and 25 days; in the case of the hospital orderly already described it was probably 18 days. Quite independently, Hunt and McNee in France concluded that it was between 14 and 24 days. The following three cases are typical of those which led to my estimate of the incubation period.

CASE 1.—Sergeant —— was admitted for rhinitis on Dec. 27th, 1915, into a ward in which there were at the time two patients suffering from the periodic form of trench fever, no other cases of which had yet been observed in his unit. On Jan. 1st, 1916, he was moved into another ward in which there were, and have since been, no such cases. When convalescent from the rhinitis, which had been accompanied by no pyrexia or pains in the head, back, or legs, he suddenly

became ill on the evening of Jan. 24th. His temperature in the morning was normal, but at 6 P.M. it was 104° F. This proved to be the first pyrexial period of a typical attack of the periodic form of trench fever. It was probable that the infection was contracted from the other cases in the ward between Dec. 27th and Jan. 1st, between 23 and 27 days before the onset of symptoms.

CASE 2.—Private —— went to France at the beginning of the war with the 1st —— Regiment. He was wounded in January, 1915, and was in England until the end of 1915, when he came to Salonica, joining the 2nd —— Regiment, which had come there from France in November, on Jan. 13th, 1916. A few days after he arrived he became lice-infested. On Jan. 21st he went to a field ambulance and then to a casualty clearing station with a hydrocele; he was transferred to a stationary hospital on Feb. 6th. On the 12th his temperature rose and a typical attack of the periodic form of trench fever began. His clothes were disinfected when he entered the casualty clearing station, and he had no more trouble with lice after his admission there. It is probable that he contracted the disease whilst with his regiment—i.e., between 24 and 16 days before the onset; as he was not lice-infested until he had been with his regiment some days, the incubation period was probably about 20 days.

CASE 3.—A patient was admitted into hospital for quinsy. He was in a ward in which there were no other cases of trench fever, but he developed the disease 14 days after admission. He had probably contracted it whilst still with his regiment, in which at least one case had already occurred, so that the incubation period was over a fortnight.

Symptoms.

The disease generally begins suddenly without any premonitory symptoms, but a feeling of malaise occasionally precedes the attack for a day or two. The patient complains of severe headache, especially frontal and behind the eyes, and this is rapidly followed by pain in the lower part of the back and on the second or third day in the legs. Pain in the neck is occasionally observed; in two cases mentioned by Hunt and McNee pain and stiffness in this region were so severe that a lumbar puncture was performed in order to exclude meningitis, and I also saw two cases in Salonica in which this was done. The patient generally shivers, but there is never a definite rigor; he is occasionally flushed and often sweats profusely. The bowels are regular or constipated, and there is no nasal or bronchial catarrh; the appetite is lost, the tongue is moist and often slightly furred, and occasionally mild pharyngitis is present. Herpes labialis has occurred in a few cases, but less frequently in the long than in the short form of the disease. There is no rash.

The onset is sometimes extremely abrupt; the patient suddenly feels giddy with a burning head, he shivers and may be very short of breath, and complains of a pain in his left side. He has to fall out if on parade or marching and has often great difficulty in returning to camp without assistance.

In a few cases, in which constipation is generally present, there is some abdominal pain with slight distension and tenderness, and there may be nausea and even vomiting at the onset. Four out of my first 50 cases of the periodic type were sent to hospital diagnosed as appendicitis; in one a normal appendix was removed and a second would have been operated upon had he not refused. The abdominal symptoms rapidly disappeared, and in the relapses they were less prominent than the other symptoms.

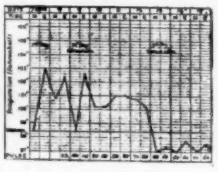
When the pain in the legs is severe there may be some cutaneous hyperæsthesia over the shins. In several cases the periosteum of the tibia has seemed to me to be rough and thickened, as it pits slightly on pressure, although no pitting of the subcutaneous tissue was present. The tenderness is most marked over the lower half of the shins and may be very severe, a comparatively slight pressure causing the patient to cry out, and the pain produced may last for hours. A less degree of tenderness is often present in the tendons behind the knee, and occasionally in the ligamentum patellæ and along the course of the femur. The shins are always tender, even if the patient complains of no pain in the legs, but tenderness appears most marked in groups of cases and at certain times. Graham did not mention it, and it was not observed in the earliest cases in Salonica. There is little or no tenderness of the calves or other muscles. The knee- and ankle-jerks are normal.

In the first attack the spleen is sometimes palpable or is found to be enlarged on percussion and there may be some tenderness in the left hypochondrium. Although this was certainly the case in Salonica, Herringham and Hunt and McNee never found any splenic enlargement in the cases they observed in France.

Leucocytosis is often, but not always, present during the pyrexial attacks; the count varied between 4700 and 22,000 per c.mm. in 35 cases, mostly of the short type, examined in France (Hunt and Rankin; McNee, Renshaw, and Brunt). In many of the cases examined both in France and in Salonica there was a relative increase in the large mononuclear cells (Elworthy, Urquhart). Polychromatophil cells above the normal size, with well-marked punctate basophilia, were observed by McNee, Renshaw, and Brunt in France, but Elworthy, working in Salonica, came to the conclusion that they only occurred in the later stages of the more severe cases. The percentage of hæmoglobin is generally about 80, though the number of red corpuscles is undiminished.

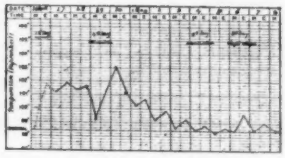
In the *short form of trench fever* the temperature rises rapidly to between 102° and 104° F., but the pulse-rate is only slightly increased. On the third or fourth day the temperature suddenly falls, generally to normal or subnormal, but there is no corresponding improvement in the symptoms. After an interval of a few hours it rises again, and then after another two to five days it falls to normal. On this occasion there is immediate relief to all of the symptoms. (Chart 1.)

CHART 1.



Short form of trench fever.

CHART 2.



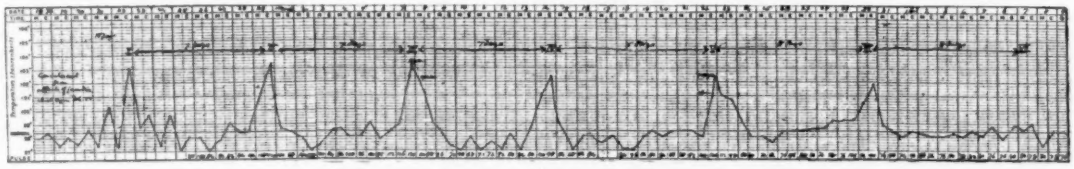
Short form of trench fever.

In some cases the remission on the third or fourth day does not occur, the temperature remaining raised for about a week. There is often a single relapse after an interval varying from a few hours to ten days, but generally less than four days. The temperature rises to 100° or 101° for 24 or 48 hours, during which the symptoms return with diminished severity. (Chart 2.) The patient is generally fit for duty almost immediately after the temperature falls again. Many cases have subsequently been kept under observation by Hunt and McNee for weeks or months without any return of fever or other symptoms, so that there could be no question of additional relapses occurring after the patient had been discharged from hospital.

In the *long or periodic type of trench fever* the temperature rises to between 101° and 104° F. on the first evening. The initial attack is variable in duration; the temperature may be normal the first morning, high in the evening, normal the second morning, and rather less high the second evening than the first, after which it remains down. In other cases the first attack may last as long as four or five days, the temperature being always lower in the morning than the preceding and following evening, the highest temperature being reached on the second or third day; in one case it reached 105·8° on the third evening, though it was normal the previous and following mornings. The pulse is generally accelerated in proportion with the temperature, but at first it may be considerably faster. With the fall of temperature at the end of the initial attack all the symptoms disappear, and the patient is often sent back to duty. After being well for two to ten days he complains of a return of headache and pain in the legs, which culminate at night; the temperature rises in the evening to a point which is generally a little lower than the highest temperature in the first attack. The temperature falls to normal or nearly normal the next morning, and either remains down or rises to a less extent the second evening, thereafter to remain normal. The general symptoms are much less severe than in the first attack and the acceleration of the pulse is less marked, but the pain in the legs and tenderness of the shins are generally greater, and they may not disappear completely in the interval between the second and third attacks, though the headache, which generally remains the most prominent symptom during the attack, is never present in the apyrexial periods. The pain in the legs is sometimes extreme and may prevent sleep; in other cases it is comparatively slight

and the patient looks and feels remarkably well, considering that he has a temperature of 101° or more. Recurrences follow periodically, the maximum temperature being always reached in the evening. (Chart 3.) The interval between the height of the attacks is fairly constant in each case,

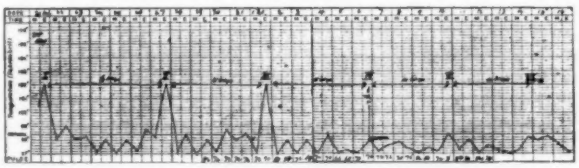
CHART 3.



Periodic form of trench fever.

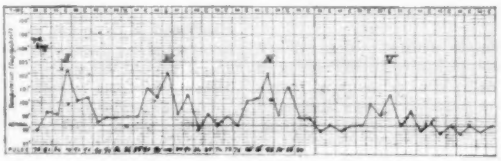
but it varies in different cases between four and eight days, five being the most common interval. Each succeeding attack is generally milder than its predecessor, and the temperature is rather lower, but in severe cases the patient feels weaker in the later intervals, and the pain and tenderness of the legs are more persistent. The later attacks may be of such short duration that the rise in temperature is not recorded at all if it is only taken twice a day. (Chart 4.) On the afternoon and evening of the day on which the attack is expected the temperature should therefore be taken every two hours, especially if there is any pain in the head or legs, as in most cases the patient knows from his sensations that there is going to be a relapse, even before the temperature rises. The temperature is sometimes only raised for three or four hours. In one case, for example, the morning temperature was 98°, at 5.30 P.M. it was 99°, at 6.30 P.M. 100°, and at 8 P.M. 101°; at 9 and 10 P.M. and at 8 A.M. the following morning it was 98·4°. In another case it was 97·6° at 5 P.M., though the patient had had a headache since the morning, but 101·2° at 8 P.M., 102·4° at 10 P.M., 101·4° at 2 A.M., 100·2° at 6 A.M., and 98° at 8 A.M., so the chart showed no rise, as the temperature in the ward was taken at 8 A.M. and 5 P.M. This liability to miss the rise in temperature accounts for the fact that it may appear from the chart that an attack has been missed, the interval between two of the later attacks being double that between the earlier ones; a headache may have been felt and a rise in the pulse-rate recorded half way between the attacks. In some cases the temperature is subnormal between the last two attacks, in which it rises to normal but no higher. In a few cases the temperature remains raised for three or even four days in each attack, the evening temperature being always higher than the morning temperature, which may be normal on the first and last days; the highest point is generally reached the second evening. (Chart 5.) In one case the third relapse was of exceptional duration and severity; this may have been due to a relapse having been missed, as the apyrexial period which preceded it was of double length. (Chart 6.)

CHART 4.



Periodic form of trench fever. In the fourth attack the rise of temperature was missed at the ordinary hour of taking it.

CHART 5.



Periodic form of trench fever, with each attack lasting three days.

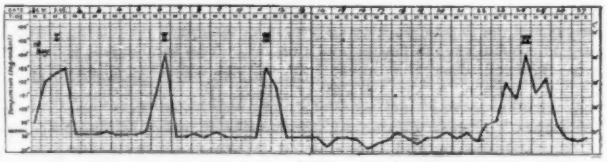
Diagnosis.

The diagnosis can only be made with certainty from a study of the temperature chart, but the association of pyrexia with tender shins is very suggestive of trench fever already in the first attack. Painful and tender shins have, however, sometimes been observed in the Salonica Army in the absence of fever, and the unsatisfactory name of "trench shin" has sometimes been used to describe such cases. Some of the cases regarded as examples of the short form of trench fever are probably really periodic cases, as there is no doubt that the later bouts of pyrexia are often entirely missed owing to the short time they last, the patient having meanwhile gone back to duty or if in hospital the evening temperature may have been taken at 5 P.M., although the rise only began at 7 P.M. or later. Several medical officers, who were very familiar with the early stages of the disease, only recognised the periodic rise of temperature after their attention had been specially drawn to its occurrence, as their patients had returned to duty after the first or second attack and had not "gone sick" for the later and comparatively slight recurrences.

The majority of cases were at first diagnosed as *influenza*, though it was generally recognised by medical officers that they were not identical with the familiar forms of influenza. Thus, there is never any nasal or bronchial catarrh, the patient rarely appears or feels seriously ill, except sometimes during the first two days of the first attack, and respiratory, and nervous complications never occur. The periodic return of pain and pyrexia and the pain and tenderness of the shins are quite characteristic and prevent confusion with influenza except at the onset.

The possibility of *malaria* must always be considered, and a blood film should be examined for the malarial plasmodium before making a definite diagnosis in cases of doubt, especially when malaria is prevalent or if the patient has previously had malaria. The differential leucocyte count is of no assistance, as there is a relative increase in large mononuclear cells in both diseases. The longer intervals between the attacks, their invariable occurrence in the evening instead of at various times of the day, the absence of true rigors and the failure of quinine given by mouth to modify the course of the illness are distinguishing features of trench fever. Several old soldiers at first thought that they were suffering from malaria, but they subsequently realised that the disease must be different, as they never

CHART 6.



Periodic form of trench fever. The third relapse (marked IV.) of exceptional duration and severity following an interval of double length.

before had had severe pain and tenderness in their shins.

A few cases of true *relapsing fever* occurred among British as well as Indian troops at Gallipoli, but only eight Indian and no British soldiers had been attacked by the disease in Salonica up to the end of April. The disease was, however, common in the Serbian Army in 1915. It was actually first described by Hippocrates in the Greek island of Thasos; so it is necessary to be on the look-out for it among British as well as Indian soldiers at Salonica, and at least one case occurred in June, 1916. In six cases I saw with Captain F. F. Strother Smith, I.M.S., the pyrexial period was generally longer, varying between two and a half and six days, and the fever was higher than in trench fever, the maximum temperature in each attack being between 104° and 105·6° F. Successive relapses did not diminish in severity unless they were cut short by injecting salvarsan, the effect of which was almost instantaneous. The patients were extremely ill and often delirious during the pyrexial periods, and the delirium occasionally continued after the temperature fell. Bronchitis was common and there was no pain in the legs or tenderness of the shins. The apyrexial periods varied between two and eight days, six days being the most common, but the periodicity was less regular than in the periodic type of trench fever. The spirochæte was found without difficulty in the blood during the pyrexial period in every case. The disease may, however, be less severe when it occurs among Europeans.

Prognosis.

There have been no fatal cases and the patient never appears seriously ill, except occasionally for a very short time in the first attack.

Until the commencement of the hot weather in Salonica at the end of May no complications had been observed, with the exception of phlebitis of the femoral vein in one case and slight jaundice in two cases, but the latter, at any rate, was probably accidental. With the onset of the hot weather it was found that trench fever was often accompanied by a moderate degree of cardiac dilatation, which resulted in the development of "soldier's heart," if the patient returned to full duty too soon. Endocarditis has never occurred. Hunt and McNee have not observed albuminuria, but Herringham found a trace of albumin, which soon disappeared, in a few cases. I know of one case in which albuminuria occurred in Salonica, and I have seen a similar case—a soldier from Flanders—in London.

The total duration of the periodic type of trench fever from the onset to the end of the last attack is generally between four and six weeks, but some cases appear to abort, and in a few others attacks may recur for several months, the patient remaining quite well in the intervals. I saw a sergeant with the periodic form of trench fever in January, 1916, in Salonica; he had had similar attacks at intervals since August, 1915, when he first became ill in France. In most cases the patient rapidly gets strong again after an attack, and is generally fit for duty after the second period of pyrexia, though he may have to rest for a few hours when the later attacks occur. Sometimes, however, great exhaustion follows and convalescence is slow.

Prophylaxis.

As the disease is probably conveyed by lice, which become infected by biting a patient during an attack, every effort should be made to keep troops free from them. All cases of trench fever should either be sent to hospital or isolated, and the patient's clothes and bedding should be specially disinfected as well as that of all men who have recently slept near him. After the initial or the second attack a man is often able to return to duty; it is very important that he should be kept under observation, and if he again becomes verminous his clothes and bedding should again be disinfected. Men who are still having attacks or have recently recovered should sleep together, isolated from the other men in their unit, but there is no reason why they should not work with them.

Treatment.

No treatment has yet been found which prevents the periodic return of attacks or which is really effective in overcoming the pain. It is generally agreed that in the first attack considerable relief occurs if the tendency to constipation is prevented by aperients. Acetyl-salicylic acid is the most effective analgesic drug. Quinine given by mouth has no obvious effect, but I have found that the subcutaneous injection of gr. x. of the bihydrochloride whenever the temperature rises above 99° appears to put an end to relapses in prolonged cases. Salvarsan and antimony have proved useless. In one severe case Hunt and McNee tried intravenous injections of eusol without success and in two others 20 c.c. of the serum of a convalescent patient were injected intravenously without influencing the course of the illness.

Numerous local applications, both hot and cold, have been used for the painful shins; some of them have appeared to do good in certain cases, but the most frequently successful seems to have been a cold compress of saturated magnesium sulphate solution, which was first recommended by Captain D. S. Harvey. In slight cases gentle massage has given temporary relief. I have recently seen a number of cases with Captain W. R. Reynell, in which considerable improvement followed the use of a galvanic bath with frequent reversals of the current. In a few cases in Salonica the periosteum was incised, but when this was done on one side only, improvement occurred with equal rapidity on the opposite side. Even if the results had been more promising I should regard the operation as quite unjustifiable, as the pain always disappears spontaneously in the course of a few weeks and often quite rapidly even when it is exceptionally severe.

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THE OPERATION OF LARYNGO-FISSURE.

SOME NEW INSTRUMENTS SPECIALLY DESIGNED FOR IMPROVING THE TECHNIQUE.

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THE brilliant results obtained during recent years by the operation of thyro-fissure in cases of early cancer of the interior of the larynx, more especially in the vocal cord area, have brought this comparatively old operation more prominently to notice.

An anterior median vertical fissure of the larynx may include fissure of the thyroid or cricoid cartilages, or of both. Fissure of the cricoid alone is probably a very rare procedure. In the treatment of chronic inflammatory stenosis of the larynx a full laryngo-fissure through the thyroid and cricoid cartilages is always performed, and usually the incision extends through some rings of the trachea, thus constituting a laryngo-tracheostomy or tracheo-laryngostomy. In operations for malignant disease, and in very exceptional forms of non-malignant disease, the lesser form of laryngo-fissure—i.e., thyro-fissure—is the operation of choice, the cricoid being left intact. This shorter form of laryngo-fissure is frequently alluded to as thyrotomy, and that nomenclature was not only employed by Butlin and Semon in recording their numerous cases, but their example has been largely followed by specialists and general surgeons all over the world.

Thyrotomy as a term is not free from ambiguity, however, and does not differentiate between incising the thyroid gland and the thyroid cartilage. The same criticism in a lesser degree applies to thyro-fissure. Durham[1] in 1883 expressed his opinion that the term thyrotomy is more applicable to cutting operations on the thyroid gland, and suggested that any operation in which section of one or other or both of the larger laryngeal cartilages is made should be termed "laryngo-chondrotomy." For the sake of clearness Tilley[2] has both spoken and written of thyro-chondrotomy instead of thyrotomy. Hill,[3] in discussion, has suggested that laryngo-fissure should be retained for the full incision where both cartilages are fissured (which is occasionally necessary in cases of considerable subglottic extension of the lesion), and thyro-chondro-fissure adopted for the shorter form of laryngo-fissure.

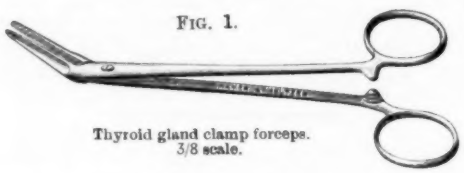
[1] Holmes's System of Surgery, vol. i., 1883, p. 768.
[2] Brit. Med. Jour., 1898, vol. ii., p. 1218; also Proc. Roy. Soc. Med. Laryngol. Sect., vol. ix., Dec. 3rd, 1915, p. 48.
[3] Proc. Roy. Soc. Med., Laryngol. Sect., vol. viii., Dec. 4th, 1914, p. 35.

In the title of this communication I have employed the term laryngo-fissure in its old comprehensive sense as including both the longer and shorter incisions. The body of the paper is largely concerned with the lesser variety of laryngo-fissure, and this I have alluded to as thyro-fissure, considering it less ambiguous than thyrotomy and a sufficiently well-understood term.

A comparison of the statistics of this operation from 1889 to 1914—i.e., a period of 25 years—shows such great progress, especially during the latter half of this period, that we now expect to obtain a lasting cure in 80 per cent. of cases. The death-rate at the present time has also been reduced to less than 4 per cent., and in the hands of the very experienced and skilled operator to nil. Nowhere in the whole of the realm of the surgery of malignant diseases, says Chevalier Jackson,[4] have such results been obtained. This success is due partly to the earlier diagnosis of the disease, and partly to improvement in operative procedure.

While diagnosis and technique have improved, there still remains room for a better instrumentarium. Just as in endoscopy the wise selection of instruments may be a great factor of success, so in this operation of thyro-fissure it is important that suitable instruments should be used if we are to attain the best results. The instruments[5] which I have designed for this operation have been for some years in use,

FIG. 1.

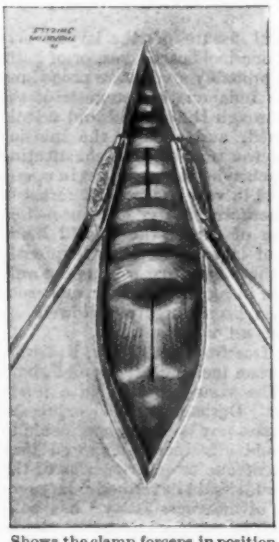


Thyroid gland clamp forceps. 3/8 scale.

though they have not yet been formally introduced to the profession, since it was my desire that they should first stand a fair trial. They are now used and recommended by StClair Thomson[6] and other of my colleagues.

Thyroid gland clamp forceps.—In the preliminary operation of median tracheotomy it is often necessary to separate the thyroid isthmus from the trachea and divide it down the middle line in order to expose the trachea. These forceps are of use in clamping each side of the thyroid isthmus before division and ligaturing. It is advisable to ligature the isthmus on each side after division, even though its vascularity may be only slight, so as to avoid not merely the chance of secondary hæmorrhage, but also risk of acute thyroidism, which has occasionally occurred as a sequel and depends upon the unregulated excessive absorption of thyroid secretion into the system.

FIG. 2.



Shows the clamp forceps in position and the incisions made in the thyroid cartilage in thyro-fissure and in the trachea. ½ scale.

The forceps (Fig. 1) are made on the principle of the Spencer Wells angular forceps, but have the outer surfaces of the blades flattened to facilitate their introduction between the thyroid isthmus and the trachea, whilst the inner surfaces are very finely serrated. The blades measure 1½ inches in length. If the isthmus is broad, each half may be separately clamped and ligatured in two portions, and for this purpose four of these forceps may be required. The advantage of this median tracheotomy, which is intermediate between the high and low operation, is that the trachea is not so deep as in the low operation, whilst there is ample room above the tracheotomy tube to allow room for the operation on the larynx.

Fig. 2 shows the clamp forceps attached to the two halves of the thyroid isthmus after separation in the middle line. The figure also shows the incision made by the shears (Fig. 4) in splitting the thyroid cartilage in thyro-fissure, together with the correct position of the incision in the trachea—i.e., through the third and fourth rings, for the introduction of the tube in the median operation of tracheotomy.

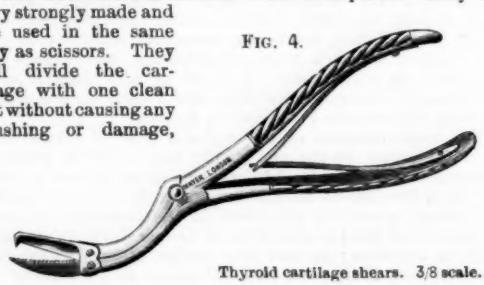
FIG. 3.

Tracheal shears. 5/8 scale.

Tracheal shears (Fig. 3).—These are short, sharp-pointed scissors of the turbinotome type. They are useful for tracheotomy in cases where the tracheal rings are ossified, and difficulty is experienced in cutting them with a knife. They are also useful for splitting the cricoid cartilage and opening the lower quarter of the larynx in those cases where more room is required. The point of the lower blade being sharp they can be also used for "stabbing" the trachea if necessary in place of a knife.

Thyroid cartilage shears (Fig. 4).—These are used for splitting the thyroid cartilage at the angle where the two alæ meet in the middle line so as to expose the interior of the upper three-quarters of the larynx, and are also useful in splitting the cricoid cartilage in those cases where there is difficulty in reaching the subglottic extension of the growth and where additional room is required. They are very strongly made and are used in the same way as scissors. They will divide the cartilage with one clean cut without causing any crushing or damage, thus avoiding the risk of perichondritis and sepsis, which has in some cases followed the use of other instruments.

FIG. 4.



Thyroid cartilage shears. 3/8 scale.

The lower blade has a very fine saw edge to prevent lateral slipping during cutting, and is curved and pointed to facilitate its introduction through the crico-thyroid membrane, under the lower edge of the thyroid cartilage, and upwards between the vocal cords. The upper blade is provided with a sharp spike at the extremity of its cutting edge in order to assist in transfixing the lanynx and keeping it steady during the cutting. The larynx can therefore be carefully divided through the anterior commissure so as not to injure either vocal cord. The position of the handles in relation to the blades is such that they lie well above the neck, so that the tracheotomy tube already inserted in the trachea does not get in the way of the operator's hands.

Experience has proved the great advantage of these cutting shears over any other instrument used for this purpose. They may also be used in the treatment of stenosis of the larynx by the operation of laryngostomy—i.e., laying open the larynx anteriorly by fissure of the thyroid and cricoid cartilage and keeping it open for a long period of treatment. In such a case they will divide the cartilages, whether ossified or not, and soft parts, including the skin, at one cut.

Fig. 5 shows the correct way of introducing the cutting shears in the operation of laryngo-fissure. The sharp-pointed lower blade of the instrument is seen entering the

[4] Peroral Endoscopy and Laryngeal Surgery, 1915.

[5] Shown at the Laryngological Section, Royal Society of Medicine. See Proc. Roy. Soc. Med., Laryngol. Section, vol. ix., Dec. 3rd, 1915, pp. 34-36.

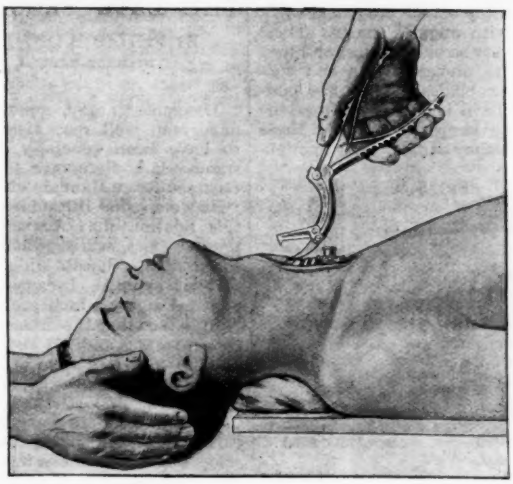
[6] Intrinsic Cancer of the Larynx after Operation by Laryngo-fissure, Proc. Roy. Soc. Med., Laryngol. Section, vol. ix., Nov. 5th, 1915, p. 8.

crico-thyroid membrane to reach its position between the vocal cords. It also shows the position of the patient's head, neck, and shoulders; the head being supported by an assistant so as to keep the parts in the middle line.

Fig. 6 shows the position of the shears in cutting through the thyroid cartilage. The instrument is removed by releasing the pressure of the fingers on the lower handle, which causes the upper blade to spring back and leaves the lower blade to be withdrawn in the opposite direction to its introduction.

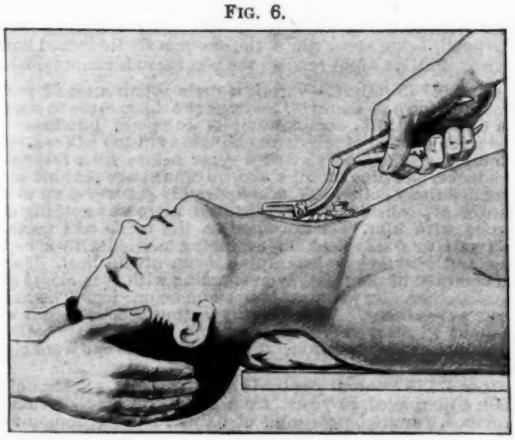
Thyroid cartilage saw (Fig. 7).—This is a small fine saw which is not so cumbersome as those formerly in use. It is intended for partially sawing the larynx before using the shears in those cases in which the upper and lower edges of the thyroid cartilage are ossified, as is so frequently met with in elderly people; or it may be used to saw partly through the whole length of the thyroid angle in the middle line in order to make a groove for the cutting shears. The depth of the saw blade is only 4 mm., so that it is unlikely to do any damage to the intralaryngeal soft parts. The shaft is bent in such a way that when the saw is used by the operator standing above the head of the patient, the patient's chin does not get in the way of the operator's hands. If it is used from below the operator's hands are well away from the neck and do not come in contact with the tracheotomy tube.

FIG. 5.



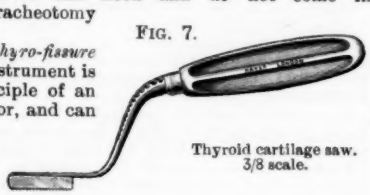
Shows correct way of introducing cutting shears in laryngo-fissure.

FIG. 6.



Shows position of shears in cutting through thyroid cartilage.

FIG. 7.



Thyroid cartilage saw. 3/8 scale.

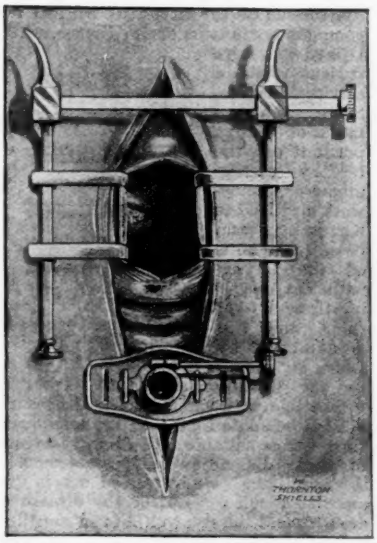
Self-retaining thyro-fissure retractor.—This instrument is made on the principle of an abdominal retractor, and can be used either for the cervical skin incision, the thyro-fissure, or the complete laryngo-fissure. It is most useful for separating the lateral halves of the larynx after they have been split open by the shears and retaining them in any position. With this retractor (Fig. 8) the larynx may be opened and closed, gradually or quickly, with the greatest facility without overstraining or damaging the two separated alæ of the thyroid cartilage, as may occur with ordinary hand retractors, and which may give rise to subsequent discomfort and difficulty in swallowing. The retracting hooks may be so adjusted, or one removed on either side, that they do not interfere with the dissection of the growth from the inner wall of the larynx. It can also be used if necessary to hold back the skin and soft parts during the preliminary operation of tracheotomy. It therefore does away with the necessity of one assistant.

Perichondrial elevator.—With this instrument the soft parts together with the perichondrium are raised off the inner surface of the thyroid cartilage as is done in the parallel operation of subperichondrial resection of the septum. As the cartilages are usually ossified in these cases periosteal rather than perichondrial resection would perhaps be the more correct description. It may also be used as a dissector for separating the muscles in the middle of the neck and for raising the thyroid isthmus off the trachea in the preliminary operation of tracheotomy. The handle of the instrument may be passed under the isthmus and used as a director during its division.

Intralaryngeal forceps.—These are especially useful for grasping the growth during its removal with the scissors. They are made with smooth circular unserrated ends which prevent tearing into or crushing the growth, such as may occur with ordinary dissection or tenaculum forceps, and consequently the risk of reinfecting the wound by cell transplantation is avoided. The importance of avoiding this reinfection has been referred to by many writers. Lack,[7] amongst others, has discussed this matter. Crile[8] advises that to avoid reimplantation of cancer cells no instrument or sponge that has touched the cancer surface should be used again, nor should they touch anything else that may be used again in the operation.

These forceps may also be used for inserting the tethered sponge or gauze into the trachea after the larynx has been opened. They are made either straight or angular (Fig. 9) to suit the convenience of operators.

FIG. 8.



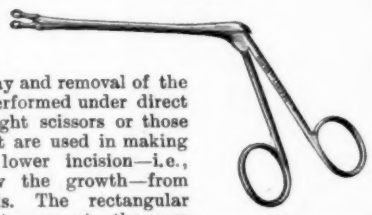
Shows the two halves of the thyroid cartilage held apart by the self-retaining retractor, exposing a full view of the inside of the larynx. On the right vocal cord is seen the growth.

[7] THE LANCET, 1896, vol. i., p. 1638.

[8] Operative Surgery of the Nose, Throat, and Ear. By Hanau W. Loeb. Review in Journ. of Laryngol. and Rhinol., 1915, vol. xxx., p. 511.

Intralaryngeal scissors (Fig. 10).—(*a*) Straight blades; (*b*) blades curved on the flat; (*c*) blades curved at right angles; and (*d*) straight blades with angular shafts. These have been made with small yet very strong blades, and long shafts which are strengthened to prevent strain and consequent weakness in the cutting blades. After the perichondrium with the soft parts have been raised from the inner wall of the larynx by the periosteal elevator these scissors are of great service, for they can be easily manipulated inside the laryngeal cavity without interfering with the view; consequently the entire cutting away and removal of the growth may be performed under direct vision. The straight scissors or those curved on the flat are used in making the upper and lower incision—i.e., above and below the growth—from before backwards. The rectangular scissors are used to separate the mass posteriorly from the arytenoid cartilage.

FIG. 9.



Angular intralaryngeal forceps. 3/8 scale.

Lack[9] has described and summarised the difficulties of this operation as mainly due to the fact that "splitting the thyroid cartilage and pulling aside the two halves with retractors gives a very poor view of the interior of the larynx; that with this opening there is great difficulty in manipulating forceps and cutting instruments, also in defining the limits of the growth and removing it thoroughly." He goes on to say that in thyrofissure to obtain sufficient access it is often necessary to divide the thyrohyoid membrane and "to pull the two halves of the larynx forcibly apart"; in consequence, the patient after the operation may have "difficulty in swallowing." Also, that after thyrotomy there is often "considerable pain for some days," due probably to the "wrenching apart" and "bruising of the tissues" from the prolonged retraction, &c. He therefore suggests that the difficulties are best overcome by resecting a portion of the healthy cartilage underlying the growth in one piece together with the growth.

The chief object, however, of the operation of thyrofissure is thoroughly to remove the growth with as little destruction of the larynx as will, so far as possible, ensure complete eradication of the disease, while at the same time leaving the patient with a serviceable voice. Since the removal of a large portion of the healthy cartilaginous framework may lead to narrowing and possibly stenosis of the larynx, with consequent impairment of voice, and this is admitted by Lack, it should be our main endeavour to save rather than destroy, compatible with safety, the healthy surrounding parts.

FIG. 10.

Intralaryngeal scissors. 3/8 scale.

Improvements in technique, consequent on the introduction of more suitable and efficient instruments, have resulted in these difficulties being overcome. The operation of laryngo-fissure as now carried out is greatly simplified, the more thorough removal of the disease can be more easily assured, and the risk to life from so-called recurrence, which usually implies imperfect removal, reduced to a minimum.

The illustrations were drawn for me by Mr. Thornton Shields from special dissections prepared to show the steps of the operation and the advantage of the instruments employed. The instruments are made to my design by Messrs. Mayer and Meltzer, of Great Portland-street, W. The retractor and clamp forceps were originally made for me by Mr. Lewis, of Westmoreland-street, W.

[9] See THE LANCET, 1896, vol. i., p. 1638. Partial Excision of the Thyroid Cartilage as an Alternative to Thyrotomy in Malignant Disease of the Vocal Cords, Proc. Roy. Soc. Med., Laryngol. Sect., 1916, vol. ix., p. 62. Partial Resection or Window Resection of the Larynx for Intrinsic Malignant Disease, Journ. of Laryngol., 1916, vol. xxxi., pp. 121–128.

THE LATE SEQUELÆ OF FRAMBŒSIA.

BY PHILIP HARPER, M.R.C.S., L.R.C.P. LOND.,
DISTRICT MEDICAL OFFICER, RA PROVINCE, FIJI.

Locomotor ataxy, general paralysis of the insane, and aneurysm, well recognised as sequelæ of syphilis, seem to have been generally overlooked as remote results of frambœsia.[1] Reference to Allbutt's "System of Medicine," Castellani's "Manual of Tropical Medicine," and the "Encyclopædia Britannica" fails to find any mention of this relationship. Amongst Fijians syphilis does not at present exist, whilst frambœsia is universal.[2] We can be sure that the disease which is universal to Fijians is yaws and not syphilis, because of (1) its symptomatology and physical signs, which are different from those of syphilis; (2) the fact that the disease is not hereditary; (3) the therapeutic tests; and (4) the fact that there is not a single absolutely certain case of primary syphilis in a Fijian nor of any hereditary syphilitic manifestations in Fijian infants.

The following are a number of cases of tabes and general paralysis of the insane occurring in one district medical officer's routine practice in a district of 6000 Fijians. Several other but less clear cases were seen. Aneurysm is so common in Fijians, both male and female, that I have not included any accounts here, but it may be of interest to note that my first post-mortem examination in Fiji was on a middle-aged Fijian native minister who died suddenly from an aneurysm that had burst into his pericardium.

With regard to the cases that follow it may fairly be said that the Fijian is a difficult subject to examine for nervous disease, partly owing to the prevalence of physical conditions which are unusual among Europeans. For instance, trachoma, or a disease very similar to it, too often prevents the pupils being seen, whilst the enormously thickened horny sole of a Fijian's foot renders the plantar reflex unobtainable.

CASE 967/15 (tabes).—Vereti, a male Fijian aged 29 years, from the town of Yanuyia, Nadroga province, came to see me on Oct. 26th, 1915, complaining of complete blindness in the right eye and of increasing blindness in the left eye. His illness, he said, had started a year before with fever and headache, and nine months ago he was aware that his sight was definitely going. This had steadily got worse up to the date of his consulting me. He said there was nothing else wrong with him. On examination the urine was normal. His gait was a typical high-stepping motion with a broad base and with a violent stamping down of the heel. There was marked incoördination on standing with eyes closed and feet together. He was unable to stand on one leg. The knee-jerks were absent. After lengthy testing the left pupil was thought to react very sluggishly and very slightly both to light and accommodation. The media of the eye were clear and the discs easily seen.

CASE 478/16 (general paralysis of the insane).—Solomoni, a male Fijian aged 30 years, from Naqiqi town, Nasavusavu province, came complaining of pains in the abdomen and legs. The knee-jerks were increased; there was considerable muscular incoördination; the right pupil was large and the left small, neither reacting to light but both reacting to accommodation.

CASE 1047/15 (tabes).—Orea, a male adult Fijian from Masimasi town, Tai Levu province, had double optic atrophy, absence of knee-jerks, inability to stand on one leg. The pupils were small; there was, of course, no reaction to light, but on being told to look into the distance it was considered that the right pupil was enlarged.

CASE 48/16 (tabes).—Paula, male adult Fijian from Vaidoko town, Ra province, had double optic atrophy, absence of knee-jerks, and the left pupil was irregular and smaller than the right. There was no pupillary movement to light or accommodation.

CASE 465/15 (general paralysis of the insane).—Taniela, a male middle-aged Fijian of Naukuloa town, Ra province, came to see me on June 4th, 1915, saying that ten years ago he had been in hospital for backache. He remained in hospital for many months without improvement and then left the hospital and, as he said, recovered. His present illness was described as having started three months before his visit to me with tremor of the fingers and tremulous,

[1] H. A. A. Nicholls (Dominica, W.I.): "In yaws ..... there are no lesions of the nervous system, as in syphilis."—Twentieth Century Practice, London, 1899, vol. xvi., p. 332.

[2] Manson: "Against its [yaws] being syphilis is the practical absence of syphilis among the natives of Fiji, where this form of ulceration is particularly common."—Tropical Diseases, fourth edition, London, 1907, p. 576.

rather inarticulate, speech. His relatives volunteered the information that he was getting thin and weak, whereas he had previously been an unusually powerful man, and that his disposition had completely changed. He had been an exceptionally trustworthy, well-behaved, Government official of a very religious turn of mind. His disposition was said to be now quite the opposite. On examination speech was found to be tremulous and rather explosive. Although he used to be a lay reader, now when told to say the Lord's Prayer his articulation became quite unintelligible at the Fijian equivalent of "Hallowed be Thy name." The knee-jerks were very much increased; there was a tremor of the fingers which prevented the patient from picking up a pin. He was under my care for three months, during which time his mental condition got rapidly worse. Towards the end of this time his mental condition is shown by the fact that he told me that he was a harbour master (a high office in Fiji), and on another occasion that he was a big landowner and would give me certain very valuable lands which, as a matter of fact, are now owned and worked by Europeans. There was no basis of truth in his statement that he was a harbour master or a landowner. He then one day went to the house of a native medical practitioner during the absence of the latter, and exposed himself indecently to the native doctor's wife and made indecent suggestions to her. He was then sent to the Suva Lunatic Asylum, where he now remains. During the regrettable occurrence which led to his detention in the Suva Lunatic Asylum he was supposed to be in the charge of his brother, named Tiacoro, whose case will be next described.

CASE 678/16 (general paralysis of the insane).—Tiacoro, a middle-aged male Fijian of Nanukuloa town, Ra province, came to see me on August 5th, 1916, with the history that until four months previously he was quite well. At that time he went to see Taniela (the patient in the previous case) at the lunatic asylum. Whilst in Suva he had, he says, filarial fever (he is subject to attacks of filarial fever and has elephantiasis of arm, leg, and scrotum). He was in Suva only a week or two on this occasion, and on returning to Ra he was weak and depressed. This weakness increased, until on August 3rd he was discovered by a native medical practitioner, Tomasi Mawi, at 3 A.M. wandering away in the bush "looking for Taniela," as he said. On examination he was found to be very much thinner than he was last year when I examined him. His face was bloated and expressionless, a great change from his alert, vivacious expression of a year ago. Articulation was hesitating and difficult, but correct. He had a fine tremor of his fingers, which made him very clumsy. The knee-jerks were very much increased: the pupils were small, equal, and sluggish in their reaction to accommodation and there was absolutely no reaction to light. The sight was not affected.

It will follow from the above cases that there is a very high rate of such nervous disease amongst the Fijians, but it must be remembered that the whole Fijian population has been infected with yaws, and probably the case-rate following yaws might not greatly differ from the case-rate following syphilis.

Fiji.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

WOUND OF THE PORTAL VEIN; OPERATION; DEATH NINE DAYS LATER.

BY W. H. C. ROMANIS, M.B. CANTAB., F.R.C.S. ENG.,
TEMPORARY LIEUTENANT, ROYAL ARMY MEDICAL CORPS.

THE following case of shell wound of the abdomen, which was treated in a casualty clearing station, may be of interest not only on account of the actual injuries caused but also as an instance of a shell fragment passing through the abdomen from front to back without injuring any portion of the intestinal canal.

An Australian soldier was wounded by high-explosive shell at 4 A.M. on July 5th, the fragment entering just below the left costal margin, one inch to the left of the ensiform cartilage. When first seen late the same evening the patient's condition was bad; he was pale and cold, with a thready pulse of 120, vomiting was marked and the abdomen was very rigid all over, tenderness being especially marked in the epigastric region. Under chloroform a laparotomy was performed through the left rectus at 3 A.M. on the 6th, 23 hours after the wound, and the abdomen was found to contain a large quantity of fresh blood. A track was traced down and to the right through the left lobe of the liver, emerging on its under surface, passing through the lesser omentum and tearing a lateral hole about half an inch long in the portal vein, from which blood was gushing freely. A plug was placed in the liver wound and two artery forceps were clamped on the side of the vein in a longitudinal direction, thus controlling the hæmorrhage. The track of the missile was then seen to pass on just to the outer side of the second part of the duodenum and to pierce the peritoneum of the posterior abdominal wall here. Owing to the condition of the patient the fragment was followed no farther, and a rapid examination of the stomach, small intestine, and transverse colon discovered no perforation. The blood was then mopped out and the wound closed in three layers in the usual way, the plug and artery forceps being left *in situ* with their handles emerging from the upper end of the incision, half an inch of which was left unsutured for that purpose. Next day the patient was much better, with no vomiting, and he continued to improve for several days; the plug was removed on the second day and the artery forceps taken off on the third day without any difficulty. Improvement continued till the eighth day, when the patient was doing well and eating solid food, his bowels being opened naturally each day. On the evening of the eighth day, however, he suddenly complained of severe hypogastric pain, vomited twice, and passed some urine with much blood in it. His abdomen remained quite soft and mobile, but his pulse failed and he died in an hour.

Post mortem there was no peritonitis, no adhesions, and no perforation of the intestinal tract. The lumen of the portal vein was patent, the wound in it being represented by a sound scar, and the liver substance appeared quite normal. A large retroperitoneal hæmorrhage was present round the right kidney, and on dissecting out the right renal artery an ulcerated hole half an inch long was found on its posterior aspect, close to which there lay a small jagged piece of shell-case, a little larger than a green pea. The patient thus apparently died from secondary hæmorrhage from the renal artery on the eighth day.

Several other instances have been recorded in the present war of cases in which artery forceps have temporarily been left on the large veins of the abdomen, and the above case is only published as one of an uncommon class.

CASE OF TONSILLITIS WITH HÆMORRHAGIC ADENITIS.

BY C. FREDERICK STRANGE, M.R.C.S., L.R.C.P. LOND.,
TEMPORARY CAPTAIN, R.A.M.C.; EMERGENCY SURGEON, CONNAUGHT HOSPITAL, ALDERSHOT.

IN the following case of tonsillitis the unusual complication of hæmorrhagic adenitis occurred.

The patient, aged 22, of good physique, R.A.M.C. orderly, was admitted to the Connaught Hospital, Aldershot, on June 27th, 1916, with acute tonsillitis. He had had an attack of tonsillitis last year when at Malta, but never any other illness. His present attack, which commenced the day before admission, came on suddenly while on parade with shivering and chilliness, headache, and sore-throat. The headache was so severe as to prevent sleep. On admission he complained principally of sore-throat. On examination the pharynx was red and inflamed, but there was no swelling of the tonsil and no follicles. Temperature 102° to 103·6° F.

On June 29th our medical specialist, Captain A. Abrahams, asked me to see the patient with a view to surgical interference, as during the past two days a large swelling on the right side of the neck had appeared. I considered this advisable, and the patient was transferred to a surgical ward. Temperature 103°, pulse rapid, respiration not affected. The patient looked very ill indeed. A large glandular swelling occupied the whole of the anterior superior triangle of the neck on the right side, extending from the angle of the jaw to beyond the posterior border of the sterno-mastoid. The swelling was very painful and tender to the touch. There was no fluctuation nor pitting of the skin on pressure. The right tonsil was much enlarged, covered with follicles, red, and tender. He could only swallow liquid food with difficulty.

Operation on June 30th under general anæthesia. An incision 2 inches long was made over the most prominent part of the swelling and a large gland (the size of a pigeon's egg) was exposed. The gland was steadied with forceps and an incision made through the whole of its substance. I had thought that perhaps there might be a gland commencing to break down with pus formation at the centre, but no pus was present. Countless minute hæmorrhages had taken place into all the substance of the gland and the enlargement was entirely due to these hæmorrhages. The gland was left alone. The lower part of the wound was closed with

silkworm-gut sutures, the upper part being left open. No drainage-tube was inserted, the wound being dressed with sterile gauze.

The immediate effects of the operation were most striking. The next day the temperature had fallen to normal, and remained normal till the patient's discharge from hospital. His general condition underwent a sudden transformation. A day previously he was obviously very ill, his facies resembling that of an acute abdominal condition. He could take no food and did not want any. The next day his face was bright and smiling, he had no ill feeling, and his appetite rapidly returned. The wound healed without any suppuration; it was dressed daily with dry sterile gauze, no lotions being applied. The swelling of the neck rapidly disappeared, as also that of the right tonsil, and the follicular condition healed rapidly. In a fortnight the wound was healed, the swelling gone, the throat normal, and the patient was discharged fit for duty.

I am much indebted to Colonel W. Turner, officer in charge, Connaught Hospital, Aldershot, for his permission to publish the above.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

John Ward and His Diary.

THE proceedings of this society were reopened on Oct. 9th, by Lieutenant-Colonel D'ARCY POWER, the President, who read a paper entitled "John Ward and His Diary."

The diary, which consists of 16 volumes of manuscript, and the writing of which was cramped, smudged, and very difficult to decipher, had not hitherto received the study it merited. It was not written in diary form, but contained an irregularly arranged collection of notes, extracts, anecdotes, and observations, which threw much light on the manners of the period and on the lives of individuals otherwise known only by names. Its author, the Rev. John Ward, who was born in 1629, and died in 1681, was in residence at Oxford in the stirring times before the Restoration. He was thus a contemporary with the founders of the Royal Society, and his diary gives an insight into university life at a time when a new interest was being taken in natural science. He left Oxford in 1660, probably because of the changed order of things which followed on the Restoration, and at first seemed to be in doubt as to selecting his profession, whether to choose that of medicine or the Church, for he took Holy Orders and at the same time attended lectures on anatomy in London. Finally he became vicar of Stratford-on-Avon. The paper is given in full in the present issue of THE LANCET.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

"Séguin and his Work."

A MEETING of the South-Eastern branch of this association was held at the Medical Society's rooms on Oct. 4th, the chair being occupied by Dr. DAVID BOWER.

Dr. G. E. SHUTTLEWORTH read an interesting paper on "Séguin and his Work." He considered that Séguin, with whom he had been personally acquainted, could be designated the pioneer in the training of backward children and in the advocacy of the educational principles which were essential to their development. That master anticipated many of the modern methods which had since been accepted by the educational world as recent discoveries: his acute foresight placed him in advance of his times, for his contentions were derided by the educationists of his day. When only 27 years of age he opened a school for idiots in Paris, the first of its kind of which there was any record. It became a success, and later formed the model for similar institutions in Switzerland, Germany, America, and this country. The French Government issued a very favourable report on his work. In 1866 appeared his book entitled "Idiocy and its Treatment by the Physiological Method." In this he claims that his methods were also applicable to ordinary children. Man being primarily an animal, the predominant means of education must be through his animal activity and virility and through his senses. To attain to his best in higher spheres he must also be the best sort of animal possible—i.e., all the physical functions must be cultivated. Attention must be devoted to the physiological development of the senses before any effort is made to educate the mind, experience, not memory, being the mother of ideas. Séguin was also a great advocate of open-air schools, an idea he developed a great deal in New York; and he devised finger-drill and sensorial exercises, which had been modified and perpetuated by Madame Montessori. Séguin laid great stress on gaining the child's confidence and love, and was a great believer in religion and other spiritual agencies, his teaching appearing to centre around the precept: "To make the child feel that he is loved, and to make him eager to love in his turn, is the end of our teaching, as it has been the beginning."

Dr. R. ARMSTRONG-JONES, in discussing the paper, agreed as to the great power of spiritual influences in the education of defectives, and he had often been agreeably surprised at the success which a chaplain attained by means of the singing of hymns and simple religious precepts, and this special branch of medicine was much indebted to Séguin, who pointed out its value.

Dr. A. HUME GRIFFITH (Lingfield) spoke of the great help which Séguin's teaching had proved in a colony of epileptic children with which he was connected, where open-air schools were extraordinarily beneficial. The endeavour to give the pupils ambidexterity had produced a greatly improved general mentality. In this work, which required infinite love, tact, and patience, religious teaching produced a remarkably good effect.

Dr. BOWER, Sir GEORGE SAVAGE, and Dr. FLETCHER BEACH also spoke, and Dr. SHUTTLEWORTH replied.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—An ordinary meeting of this society was held on Oct. 6th at the society's rooms.—The retiring President, Dr. Leonard Dobson, inducted his successor, Dr. Arthur Saunders.—The new President presented to Dr. Dobson the Keetley medal, and congratulated him on the success of his year of office. Dr. Saunders then delivered his Presidential address on "Some Aspects of the Throat and Naso-pharynx in their Relation to General Medicine." After recapitulating the chief varieties of naso-pharyngeal infections, he dwelt particularly on modern bacteriological developments as aids to diagnosis, and discussed at length the treatment of tonsils and adenoids and their bearing, when diseased, on other organs and on the general condition.—A vote of thanks, proposed by Dr. A. J. Rice Oxley and seconded by Dr. G. B. Shuter, was carried unanimously. There was a large attendance of members and visitors.

Reviews and Notices of Books.

Elements of Folk Psychology: Outlines of a Psychological History of the Development of Mankind.

By WILHELM WUNDT. Authorised translation by EDWARD LEROY SCHAUB, Professor of Philosophy in Northwestern University. London: George Allen and Unwin, Limited; New York: The Macmillan Company. 1916. Pp. 532. Price 15*s.* net.

Professor Wilhelm Wundt, professor of psychology in the University of Leipzig, is one of the greatest contemporary masters of his subject, and has been responsible for more activity in the prosecution of psychological study on its philosophical side than any other modern teacher. His industry and his range of accomplishments are alike wonderful, and these outlines of a psychological history of the development of mankind display the solid learning which lies behind what is stated by the author to be a sketch.

The subject of folk psychology is dealt with in this book in four sections. The first, which has relation to primitive man, includes a discussion of the organisation of man into society, and in it we have described the beginnings of language and of art and the earliest beliefs in magic and demons. It is in the indefinite concepts of religion, which fall under the head of demon worship, that the earliest rising of the medical idea took place, the original duties of the medical man (commonly, of course, also the magic man or the priest) being to provide charms to ward off the sickness inflicted by evil spirits. The second section of the

book deals with what Professor Wundt calls the totemic age, and we have read no better introduction to the study of such difficult subjects as totemic culture, the origins of exogamy, the various systems of polygamy, the laws of taboo, and the origin of the fetish cult and of ancestor worship. Those who have read Sir George Frazer's monumental "Golden Bough" well know how extremely difficult it is to form any definite opinion on such matters, for example, as totemism and exogamy. What evidence can be collected, or what can withstand criticism, supports no one theory, and we are left to gather from Professor Wundt that a good deal of research may be required to assist our advances. In the third section we are at the age of heroes and gods. We have reached a period when the family has become organised, when classes have become differentiated, when the ideas of a legal system have become expressed in penal laws, and when states have been founded and ruled according to definite principles. The last section is entitled "Development to Humanity," and the author's views on world empires, world culture, and world religion are wise, dispassionate, and at variance with those which have been put forward in recent years by some of his prominent countrymen.

Professor Wundt, in this elementary though learned treatise, has studied the phenomena of his subject so far as possible synthetically, accepting the common conditions and their reciprocal relations. But in doing this, he points out that he has not given the various facts a proportionate degree of attention for reasons which are absolutely sound. In the case of the better known phenomena it has been found sufficient to sketch their place in the general development, while when dealing with those which are less familiar more detailed discussion is required. Hence the forms of original tribal organisation and of the consummation of marriage, demon and totem cults, and various features of primitive culture are dealt with at some length, while the social movements that reach over into historical times, such as the founding of states and cities, the origin of legal systems, and the like, are described in outline only. We recommend the book cordially to our readers.

Collected Papers on Analytical Psychology.

By C. G. JUNG, M.D., LL.D., formerly of the University of Zürich. Authorised translation edited by CONSTANCE E. LONG, M.D. Brux. With 14 figures. London: Baillière, Tindall, and Cox. 1916. Pp. 410. Price 12*s.* 6*d.* net.

THESE papers are a misnamed medley of nebulous dreamings. They do not treat of psychology, nor are they analytical. Any careful reader of the preface to the book will certainly agree with the author that there is "no scientific justification" for the procedure of the Zürich School of Psycho-analysis, of which he is father and prophet. Dr. Jung argues that since present-day science is based as a whole upon causality, the study of psychology "cannot be exhausted by causal methods only, because the mind lives by aims as well." He paraphrases this odd dictum by saying that "the method of the Zürich school is not only analytical and causal, but also synthetic and prospective, in recognition that the human mind is characterised by *causæ* and also by *fines*." (It is difficult to see any extra light from the employment of Latin terms.) He, moreover, uses the word "Psychology" as identical in content with the *psycho-analysis* now in vogue with a certain group of psychiatrists or mind-healers, for he proceeds to say that there are "two types of psychology, the one (the Freudian) following the principle of hedonism, the other following the principle of power. Scientific materialism is pertinent to the former type, the philosophy of Nietzsche to the latter ....."

In further justification, or attempt at explanation, of one of his main objects, which is to show why he differs from Freud's teaching, the author tells his readers that there is "a vital necessity" for his hypothesis because it is impossible to live according to the intimations of infantile hedonism (as implied in Freudism); and he contends that if Freud's conception is to be retained, it must be taken symbolically! "Symbols," he says, "are necessary for the moral education of mankind. 'Concrete values' cannot take their place. The further development of mankind can only be brought about by means of symbols which represent something far in advance of himself, and whose intellectual meanings cannot yet be grasped entirely. The individual unconscious produces such symbols and they are of the greatest possible value in the moral development of the personality."

The preface ends thus:—"This brief résumé may show what the reader cannot find in this collection of papers. The essays are stations on the way of the more general views developed above." It appears to us that this pregnant preface, as well as the editor's preface, which should not be passed over, very clearly shows what any reader would certainly find in the papers; and might even aid him materially in his decision as to reading further. He would find, as the present writer, who has studied them all, has found, many bare assumptions and arguments based on deductions untested by any critical appeal to further relevant observations. Psychology (the study of which to all except the present-day psycho-analysts who are disciples either of Dr. Freud or Dr. Jung, means an effort to explain the phenomena of consciousness) seems to mean, at least to Dr. Jung, the study of what he calls "the unconscious"—a term which is spelt with a capital "U" by many psycho-analysts, including the editor of the volume before us. This "unconscious" he *defines* as the sum of all those psychological events which are not apperceived, and so are unconscious! To this purely hypothetic entity, intruding into a person's "consciousness," he attributes the "neuroses" generally, which result, according to the new "psychology," from internal battles between the two powers. And on grounds such as these he builds up his "constructive" theory and founds his practice, which, in spite of his contentions, is much the same as that of all who call themselves "psycho-analysts," of whatever school they may be. In practice psycho-analysis seems to consist in a search for what is called the individual patient's "libido," which, although interpreted by Dr. Jung or his followers as "the instinctive psychological effort," the "élan vital," the "joy of living," or the "fundamental interest of the individual," is found by the practitioner to be in nearly all, if not all, cases, as in the instances cited in these papers, reducible to sexual desire.

Now it need not be argued that the influence of the sexual system on the organism has long been recognised as playing a very important part in the development of so-called neurotic disturbances, especially in civilised or highly socialised humans necessarily subject to economical and moral restraints; nor, indeed, is this fact ignored by any careful medical observer whose task it is to investigate and treat cases of mental or nervous disorder. But it is certainly not true that all cases of nervous disorder, called "functional" because the physician would not expect to find any actually demonstrable morbid condition of the nervous system if he could observe it in its working, are in any sense, however subtle, reducible to sexual disturbance, recognised or unrecognised by the patient. And with regard to such cases as may be correctly referable to unrecognised or imperfectly remembered physiological impressions affecting the sexual system, there is surely no light thrown on them by hypothesising the chimera of Unconscious Mind, and imagining an unconscious *mental* process conflicting with consciousness. Dr. Jung appears to be a spiritualist who will have no truck with those who speak of brain action apart from consciousness. He ridicules indeed, and deems as antiquated, the very notion that delusions and other mental disturbances can be provoked by morbid processes of any kind in the brain cells, arguing that such disorders occur in "certain functional disturbances," and even in normal people! "To seek to ascribe," he says, "symptoms of that nature directly to disease of the brain cells I hold to be superficial and unwarranted." This is surely a striking example of the confessedly unscientific attitude of the author; and justifies a strong suspicion that his knowledge or his memory of the facts of cerebral physiology and pathology is sadly inadequate.

To sum up, this book alone should go far towards proving to doubting readers that the theory of present-day "psycho-analysis" as set forth even by the anti-Freudian school, is the offspring of mysticism and unbridled phantasy, and that its practice, to say the least, is calculated to be very dangerous. The perusal of Chapter IX., on "Some Crucial Points in Psycho-analysis," should not be omitted by those who wish to form their own judgment on this conclusion. The editor and translator of this book, however, in calling attention to its issue in the second year

of the great European War, says: "We need a new philosophy of life to take the place of that which has perished in the general cataclysm, and it is because I see in the analytical psychology which grows out of a scientific study of the Unconscious the germs of a new construction that I have gathered the following essays together." Surely this disciple claims more than her master in pronouncing these papers to be "scientific."

New Inventions.

A STRETCHER FOR TRENCH USE.

THIS stretcher has been devised so that angles may be negotiated with the minimum of discomfort to the wounded man when being removed from the trenches. The stretcher when open, prepared for a patient lying full length, is the same width as the Furley stretcher with canvas bed of the same length (St. John Ambulance Association pattern). The importance of keeping fractured lower limbs perfectly at rest in the horizontal position will be acknowledged, but it is not possible to carry a full-length stretcher horizontally through narrow trenches with sharp turns. By flexing this stretcher at the point shown, the trunk only of a patient is disturbed and trench traverses can be negotiated without discomfort. The stretcher has been successfully carried along a trench with a minimum width of 26 inches and a maximum of 42 inches with a number of traverses at various angles. With the traverse bars slightly collapsed it will pass through a trench 21 inches wide. Once clear of sharp angles the stretcher may be restored to the horizontal position in a moment and can then be carried in the usual way.

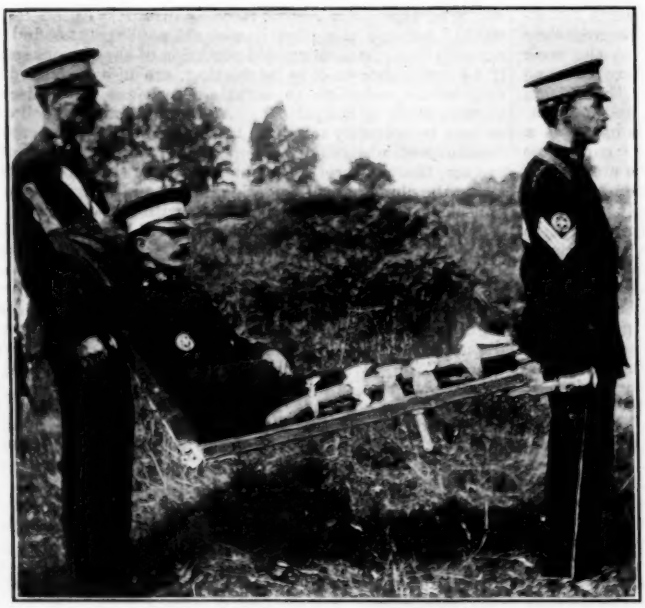
The stretcher has obvious uses apart from trench warfare wherever narrow staircases, corridors, or sharp turns are met with. The poles are of ash, 7 ft. 1 in. long, and each is provided with a hinge about the centre of its length. The hinge is of an aluminium alloy, and is so designed that it can be held securely and rigidly by a steel pin when in a horizontal position or when flexed at a definite angle. The foot ends of the poles are provided with handles which can be used in the ordinary manner or can be folded inwards parallel with the end of the canvas and permit a bearer to grip them around the traverse when he is facing the patient's feet, thus shortening the stretcher and protecting the bearer's knuckles from the trench sides. There are three traverse bars of St. John Ambulance Association pattern. One is at the foot end in the position usual on a Furley; one is a few inches from the hinge towards the head, and the third about midway between this and the head end of the poles. This type of traverse has been adopted, as it has no tendency to loosen and thus collapse the canvas.

The runners are of aluminium of pedestal pattern, each fitted with a small wooden roller, and are so shaped that they are comfortable to the hand when grasped as handles. In order to obtain great rigidity when thus used the head of each runner encircles the pole and is driven on and screwed fast.

The weight of the stretcher is 19 lb.—several pounds lighter than the Furley or the R.A.M.C. stretcher. It has successfully withstood severe tests of its strength in both positions.

The stretcher has been produced by Mr. H. Langley Jones, 25, Ailsa-road, Westcliff, at the suggestion of the Rev. H. C. Hutchings, who was then acting as a stretcher-bearer in France, and of Messrs. G. Davenport and Co., Limited, and has been made by Messrs. R. Hoe and Co., Limited, London.

FIG. 1.



The patient is sitting on the stretcher, the head end of which has been raised, and he is bandaged for a fracture of the leg. The back is held rigidly in position by steel pins. The length of the stretcher in this position is 5 ft. 6¾ in. over all. The patient is being lifted by bearers wearing Cantlie pattern slings to distribute the weight over their shoulders. The bearer at head is grasping the runners. It will be observed that the canvas does not sag under the patient.

FIG. 2.

Shows the stretcher and patient in the same position as in Fig. 1, being carried along a narrow trench. The bearer at the foot-end of the stretcher is standing aside, the handles being turned inwards, when the over-all length of the stretcher is 5 ft.

THE LANCET.

LONDON: SATURDAY, OCTOBER 14, 1916.

The Examination of Recruits for Affections of the Heart.

ONE of the most difficult problems in connexion with the examination of recruits is the exact estimation of the condition of the heart. If the heart is of the normal size, the sounds clear, and the rhythm regular, a satisfactory conclusion can be arrived at promptly; but if a murmur is heard, or there is irregularity of the beat, then skill and experience are required in order to distinguish between functional and organic conditions. The main point is to estimate, if possible, the amount of cardiac reserve power; but this is not the only matter for consideration, and, quite rightly, cases in which doubt arises are now referred to experts for opinion.

Since last February, by the direction of the Medical Department of the War Office, recruits in the London district whose rejection was contemplated on account of the state of their heart have been sent to the National Hospital for Diseases of the Heart for examination and report. As up to now over 4000 cases have been dealt with, it will be of interest to explain the general idea underlying the scheme. All recruits are seen in the first instance by a recruiting Medical Board, and those whose hearts are manifestly defective, as shown by the ordinary methods of clinical examination, are rejected or placed in the categories for which they are suitable, while those with obviously healthy hearts are passed. It is only when real doubt arises as to whether a recruit's heart is defective, or how far an observed defect is likely to impair efficiency for military purposes, that the man is sent to the Heart Hospital and subjected to a searching examination with the aid of instrumental appliances, which could not possibly be available for employment by the recruiting boards without the assistance of some such institution. After consideration of the various points and consultation with recognised authorities, a scheme of examination was decided upon at the Heart Hospital which experience has shown to be very efficient in elucidating the problems which present themselves. Every recruit is asked to state what, if anything, he complains of, and a record is made of this, together with a detailed history of his previous diseases and habits. Any subjective symptoms which may be present are inquired into in detail and recorded. He is then given a standard piece of work to do, the pulse, respiration, and blood pressure being recorded before, immediately after, and three minutes after. The urine is analysed, and an electrocardiogram is taken. In a very large proportion of the cases the heart and chest are also examined by the X rays Furnished with these data, the physicians proceed to make a thorough clinical investigation under the usual heads of inspection, palpation, percussion, and auscultation. A diagnosis is arrived at, after taking into consideration all the evidence, and an opinion is expressed as to which category of military service, so far as his heart is concerned, the recruit is to be placed under. Here the most practical point for consideration is that, although a man with a slight cardiac lesion may support well the strains of civil life, when he can stop work at will, he may not be found suitable for military service, in which he must "carry on" or become a casualty. A copy of the paper containing all the data, as well as the diagnosis and opinion, is transmitted to the Medical Board sending the recruit, with whom, of course, the final decision rests.

That the practised medical examiners who constitute the recruiting boards of London should have felt the desirability of having as many as between 4000 and 5000 cases examined in this detailed manner before arriving at a decision is perhaps one of the most striking pieces of evidence that could be adduced of the progress that this department of medicine has made during the last few years, and of the importance attached to the modern instrumental aids to diagnosis. Of 1000 cases examined 447 have been classified as fit for full military service either at home or abroad, 291 as fit for garrison duty or labour purposes, and 262 as fit only for clerical work or totally rejected. These figures are of high significance; they tend to show that many men who at the first examination did not seem fitted for military service, on further investigation were passed for some form of military work, the proportion that were classified as fit for full service being high.

A Campaign against Adult Mortality.

Dr. CHARLES F. BOLDUAN, Director of the Bureau of Public Health Education in New York, has recently stated[1] that most of the health work of late years has been directed to the saving of infant and child lives, while practically nothing has been done to prolong adult life. He illustrates this statement by a comparison of the New York life-tables of the two triennia 1879–81 and 1909–11. The comparison shows that whereas in New York the expectation of life at birth is now about ten years greater than it was a quarter of a century ago, the adult of 40 years or over has actually a shorter expectation than formerly, the decrease amounting to a year or more, according to the exact age-period. Dr. BOLDUAN finds that this condition is not confined to New York City, but applies also to the whole of the United States registration area. The death-rate per 1000 at the age-period 45 to 54 has increased by nearly 2 per cent. during the last ten years, and

[1] Monthly Bulletin of the Department of Health of the City of New York, vol. vi., No. 4.

at the next older decennium by nearly 7 per cent. He regards the solution of the problem as a matter of the greatest importance, middle age being the period at which the addition of years of life would be of most value to the race. Similar considerations have evidently weighed in the appointment by the Department of Trade and Customs of the Commonwealth of Australia of a committee appointed to inquire into the causes of death and invalidity in the Commonwealth and have resulted in a special report, which has just appeared on the risks of middle age[2] and on the chances which cut off thousands of people in their full maturity.

The causes of the risks of middle age are carefully discussed by the Australian Committee, and in a single paragraph they give without hesitation an answer to the question as to their origin. Everything, they say, which involves overstrain, everything which favours chronic poisoning of the blood with alimentary toxins or with products of tissue change, everything which encourages infection of the blood from bowel or throat must count among the causes of excessive blood tension. And in high blood tension they see the principal risk of middle age. Put shortly, accumulating wastes and unreasonable strain are the determining factors. The report draws a picture of the man who has had an active school career, with devotion to athletics, followed by a hard struggle for success in some handicraft or profession, who still taxes to the utmost his nerve and muscle, who still pursues, it may be, some vigorous athletic sport, and who takes food rapidly and in large quantity, with soup and meat forming a substantial part of his diet. The picture is one not unfamiliar in the mother country. The report goes on to call attention to the high rate of death from apoplexy as well as from pneumonia and pericarditis, which are in Australia very deadly for patients with high tension. The dangers of the period of failing tension are dwelt upon, when the persistent strain has much tried the heart, and when, if the patient is not carried off by apoplexy or some intercurrent inflammation or infection, signs of heart failure become dominant. In hospital practice in Australia at least two-thirds of the deaths attributed to organic heart disease are considered a sequel of raised tension. Due credit is given in the report to the effects of alcohol, syphilis, and gout as adjuvant causes of the risks of middle age, but stress and diet are allotted their place as the primary agents. Dr. BOLDUAN, out of a wide familiarity with the conditions in the United States, deals with the same etiological factors. The rush of modern city life has been credited, especially in America, with the increased death-rate from cardiac and arterial disease, but he finds that the rural districts show precisely the same tendency. Exposure, strain, and occupational injury are factors which are common to all classes and countries, and while alcohol, syphilis, and other chronic poisonings must take their share of the blame, stress and over-eating, especially over-eating of protein, are those on which in America, as in Australia, suspicion rests most heavily.

To combat this high adult mortality, Dr. BOLDUAN suggests an organised campaign, and he gives an outline of a plan of education for the control of diseases of the heart, kidneys, and arteries. At the outset he thinks nothing would be more effective than a large exhibition of adult hygiene on the lines of an exhibition held at Dresden a few years ago. He would keep public opinion aroused by constantly reiterating the statement in the press and elsewhere that persons over 40 do not live as long as they did 30 years ago—an assumption on which vital statistics should have some critical things to say. He would organise boards of sanitary control to watch over the health of employees, putting the responsibility for the sanitary conditions of any industry upon the industry itself. He points to the good example of the New York Department of Health, which has placed the services of a highly trained medical examiner at the call of all its employees. A complete medical examination can be obtained by them free of charge, and the information turned to good purpose in detecting the onset of degenerative disease at the earliest stage, when treatment is still hopeful of result. In the next rank of importance he places an extension of work directed against the venereal diseases. The Australian Committee begins further back with its proposals, and suggests an extension of the medical inspection of schools, and an increase of school instruction in personal hygiene. This is to be followed by an inquiry into the undue prevalence of high tension in certain occupations and by the provision of facilities for the early diagnosis and treatment of high tension. The Australian Committee proposes concretely that provision be made for industrial workers not to return to arduous work after serious illness until time has been allowed for proper convalescence; and that some system of oversight of the health of industrial workers should be instituted, correlated with the provision, when necessary, of temporary relief by some scheme of insurance. These proposals are in a line with those recently made by Professor W. J. ASHLEY in an introductory address at Birmingham University.

The evils alluded to in both the reports are very wide, and the remedies suggested, though comprehensive, seem somewhat vague. But the idea of a campaign against avoidable adult mortality is one which has much to commend itself to thoughtful people; and it need not become an opportunity for the exhibition of rampant faddiness, though risk lies in this direction. The further development of the schemes will be watched in this country with keen interest by our medical men, sanitarians, and statisticians.

[2] Printed and published for the Government of the Commonwealth of Australia by Albert J. Mullett, Government printer for the State of Victoria. No. 296. F. 6226.

FATAL CASE OF ANTHRAX.—At an inquest held at Mossley, Yorkshire, on Oct. 4th, on a Congregational minister of that town it was stated that deceased had purchased a shaving brush while on a holiday at Blackpool and the medical evidence showed that anthrax was due to the use of this brush.

Annotations.

"Ne quid nimis."

A CURVE OF WORKING EFFICIENCY.

MOST of us are aware that we do not begin our work in the morning at full efficiency, and that some time may elapse after the commencement of the working day before the maximum speed of output is reached. At the end of the working period a corresponding tailing off may be less readily observed. Exact observations on this interesting subject have been made by Dr. H. M. Vernon in regard to the output at munition works, and published as an appendix to Memorandum No. 5 by the Health of Munition Workers Committee. In works where the motive power is electric, and the amount supplied to each section is registered by a separate watt-meter, the rate of starting and stopping work can readily be ascertained by means of these power records. Dr. Vernon found that in a large shell shop which turned out 30,000 3-inch shrapnel shells per week, the power supplied began to mount up two minutes after starting time, and reached half its full value in four minutes; while the power supplied to a section of 200 women turning fuze bodies did not begin to rise till five minutes after starting time, and did not attain half its maximum value until six minutes later. In other words, the women operatives wasted about seven minutes more in starting than did the operatives in the shell shop, most of whom were men. On the other hand, the fuze-turners finished more strongly than the shell shop operatives, and it was found that both sets of operatives lost, on an average, about the same aggregate of time in starting and finishing during the course of the whole day—viz., 34 minutes. There was no inherent reason why work should have been started promptly in one shop and not in the other. Dr. Vernon considers there can be no necessity for the waste even of this amount of time in starting and finishing work, and that 10 or 15 minutes should be an ample allowance. The 20 minutes thereby saved could then be deducted from working hours without any reduction of output. The matter is of practical importance because, although stern necessity may compel long hours of labour on the part of many munition workers, it is evident that the shorter the times for which they are shut up in the factories the better their chances of health and happiness. At one large block of works the manager makes a point of going into the various shops at starting time and seeing that the operatives begin work promptly. In this way he found that a considerable amount of time was saved. Concentration at work has for a corollary longer hours at play, and is clearly shown by the memorandum to be a factor making for health.

SICKNESS BENEFIT AND VENEREAL DISEASES.

ONE serious obstacle in the way of early recognition of venereal disease and of its efficient diagnosis and treatment is now likely to be removed. At the present time venereal disease comes under the clause in the Insurance Act under which benefit is not given when illness is caused by wilful misconduct. The National Conference of Friendly Societies recently held in Liverpool was addressed by Dr. Otto May on behalf of the National Council for Combating Venereal Diseases, who put the case very forcibly for the granting of sickness benefit by Friendly Societies, trades unions, and others to their members who were known to be suffering from venereal disease; to place, in fact, venereal disease in the same position as other infectious diseases as regards their treatment. Dr. May's address was well received, and a resolution was carried:—

> That this executive committee of the National Conference of Friendly Societies, having seriously considered the report of the Royal Commission on Venereal Diseases and the several recommendations made therein, is of opinion that such vital national and domestic interests are involved that it is desirable, with a view to the effective treatment and possible ultimate extermination of such diseases, that societies should consider the advisability of revising their rules in such a manner that members shall not be deprived of sickness benefits by reason of their suffering from any such disease.

Besides this academic resolution, which might or might not carry force among the constituent Friendly Societies, a definite rule was suggested for adoption by Approved Societies pending the proposed amendment of the National Insurance Act. The rule is as follows:—

> An insured member shall not be entitled to sickness or disablement benefit in respect of an illness or accident caused by his or her serious or wilful misconduct, provided that a member shall not be deprived of sickness or disablement benefit if incapable of work through venereal disease.

This action of the Friendly Societies is another welcome indication of the change of attitude among the public at large towards the treatment of venereal diseases, and increases the hope of a really efficient campaign in the future. This hope is fortified by the fact that the London County Council propose to carry into immediate effect the recommendations of the Royal Commission.

THE BRITISH JOURNAL OF OPHTHALMOLOGY.

IN 1857 a journal of ophthalmology was started by the staff of the Moorfields Eye Hospital under the title "*The Royal London Ophthalmic Hospital Reports*." The title was at that time somewhat misleading, for although the contributors consisted entirely of Moorfields surgeons and students, the periodical contained abstracts of the ophthalmic literature of foreign countries and other matter of cognate interest. This periscope of abstracts was discontinued after 1864, and perhaps partly owing to the lack of any such convenient source of information, the *Ophthalmic Review* was inaugurated in 1882. It differed from the *Reports* in being open to all comers for original communications, whilst specialising in short reviews of current literature. These two were the only British journals devoted to ophthalmology, and apart from the Transactions of the Ophthalmological Society, started in 1881, were the only medium for the contribution of articles specifically to ophthalmic surgeons until 1903, when Mr. Sydney Stephenson commenced the publication of the *Ophthalmoscope*. Thenceforth, until the present time, all three journals have continued to appear. At the outbreak of the European war in 1914 it was felt by many that British ophthalmologists should draw together and unite in issuing a single journal which would be more thoroughly representative of British ophthalmology. Indications were not wanting that such a scheme would meet with the approval and support of their colleagues in neutral and allied countries, and, indeed, one of the strongest supporters and even initiators of the idea was the late Professor Straub,

of Amsterdam. Hence it was that in July of this year the President of the Ophthalmological Society of the United Kingdom, Mr. Walter H. H. Jessop, called a meeting to consider the matter. Attendance at the meeting was necessarily by invitation, but the greatest care was taken by Mr. Jessop, in consultation with other prominent ophthalmologists, to ensure that the gathering should be thoroughly representative of all parts of the British Islands. The result was that negotiations were set on foot to incorporate the three existing journals in a new journal, to be called *The British Journal of Ophthalmology*. These negotiations proved most successful, and in order to carry out the scheme a meeting, to which all British ophthalmologists were invited to attend, was held at the Royal Society of Medicine on Sept. 20th. At this meeting a limited liability company was formed, and so far as the financial arrangements are concerned the success of the venture is already fully assured. It is proposed to commence the publication of the new journal in January, 1917, and from that date the *Royal London Ophthalmic Hospital Reports*, the *Ophthalmic Review*, and the *Ophthalmoscope* will cease to appear. The new journal will be edited, under the supervision of an editorial committee, by Mr. Stephenson, with the help of an assistant editor. There are obvious reasons why a period of national upheaval may appear ill-fitted for undertaking new responsibilities, but such reasons under close examination will not prove so cogent as their *primâ facie* appearance warranted. Though individuals perish, the national life flows on and will continue to flow. The effects of to-day are the causes of to-morrow, and thus we, the inheritors of the past, are the guardians of the future. A revolution is a great opportunity for progress, and we feel assured that the ophthalmic surgeons of our nation, limited though their special sphere may be, are rightly actuated in thus making a bold effort to strengthen the foundations upon which they and their successors may the more firmly build.

SYMPTOMS PRODUCED BY JACKSON'S PARIETO-COLIC MEMBRANE.

THE part played by bands or adhesions in the causation of abdominal symptoms is still unsettled. In the *Medical Journal of Australia* Mr. C. E. Corlette has reported the following case which is important, as the symptoms were definitely shown to be due to Jackson's membrane. A girl, aged 19 years, was seen for severe pain in the right side of the abdomen. The attack had lasted for two days, but for the past six years or more the patient had pain in the same situation almost constantly. At various times acute exacerbations occurred. These attacks lasted several days, and had been diagnosed as appendicitis by her medical attendant, who recommended operation. All her life she had been subject to obstinate constipation, frequently requiring enemata. Examination showed her to be a well-developed, well-nourished girl of wholesome colour. The abdomen was of normal appearance, but palpation showed an area of marked tenderness at and a little above McBurney's point, with the right rectus muscle on guard. The temperature was normal, and the pulse-rate 96. There was no nausea or vomiting during the existing attack, though she had sometimes vomited during previous attacks. A provisional diagnosis of appendicitis was made and the abdomen was opened. There was a very large cæcum distended with semi-solid fæces. Just above the cæcum the ascending colon was narrowed and bound to the right side of the abdomen by a stout, broad pericolic membrane (Jackson's membrane), taking origin from the parietal wall just above the incision. It was evident that this was the cause of the trouble. There was a small peritoneal fold at the ileo-cæcal junction; apparently it was not important. The appendix appeared to be normal. Appendicectomy was done, then the ileo-cæcal band was released, and afterwards the large band incarcerating the ascending colon was dealt with. This left the colon free and unhampered. Next day she was free from pain. For a few months after operation she continued to suffer a good deal from constipation, necessitating enemata at various times. Liquid paraffin relieved the constipation. However, her condition was greatly improved. The pain returned at times, but this, too, was obviously less. The symptoms became less and less, and finally disappeared. She has now for nearly two years been quite well. But another change was even more striking. Although she was physically well developed before operation, her mental development was only that of a child of 12. Further, she had always been subject to attacks of violent and uncontrollable passion, and was most difficult to manage. During the two years that have elapsed since the operation her mental condition has undergone marked improvement. The literature of intestinal bands and kinks is now considerable, but much of it is unconvincing, and Mr. Corlette has remained cautious and somewhat sceptical. He believes that there is something in the indictment against bands and kinks, but that there is a strong tendency to over-estimate their importance. He has loosened a good many bands during abdominal work, but beyond those of definitely inflammatory origin he has not been impressed with their importance as a factor in the production of symptoms. The case now described is an exception. He regards it as an unequivocal demonstration of the trouble produced by a congenital parieto-colic membrane and of the relief following operation.

THE WORK OF PAVLOV.

EARLY in the present year we published a biographical notice of the distinguished Petrograd physiologist Professor Ivan Petrovitch Pavlov, when an erroneous report of his decease reached this country, the confusion being between him and Professor Eugeni Pavlov, a well-known surgeon. Ivan Pavlov's existence among us, and the value of his work, were brought into prominence last week, when his services to physiology formed the subject of a public lecture by Professor W. M. Bayliss at University College, London. In two regions of physiology Pavlov has done pioneer work. His studies of the coördination of the digestive processes are the better known because, though written in Russian, they have been made accessible to French and English readers. Pavlov was not the first to examine the secretions of the alimentary canal by means of artificial fistulæ, but he was the first to make the process a fine art by introducing into the physiological laboratory the precise methods of antiseptic surgery. His institute in Petrograd included a series of rooms in which the experimental animal was first washed and shaved,

next anæsthetised, then submitted to operation, and finally passed on into a series of cubicles forming practically a little hospital. Other institutes, including that at University College, London, have been based on this model. Under these conditions the success of a gastric or intestinal fistula became as certain as that of a simple aseptic operation in man. By means of the gastric fistula Pavlov demonstrated the secretion of gastric juice before food actually reached the animal's mouth, and the absence of such secretion unless the animal regarded his food with relish. Starting from these observations he gradually built up the whole modern teaching of the sequence of the digestive processes. Pavlov's second and equally important work on conditioned reflexes has been less widely recognised, for it is as yet only accessible in original Russian and partly in German translation. He was the first to investigate the functions of the higher centres of the brain by strictly physiological method and to show how extremely modifiable by concurrent circumstances are the reflexes obtained from the higher centres. The building of a new laboratory with thick walls and small windows, in order to shut out disturbing external stimuli, became a necessity for this research. A growing insight into the mechanism of inhibition has been the result of this work, some clue to the essential nature of sleep, and a means of estimating the sensibility of the various sense organs. The lecturer did not suggest it, but it seems likely that Pavlov's work may throw light on the omnipresent factor of inhibition shown by sufferers from shell shock, and that a knowledge of his work on inhibition may prove to be an indispensable preliminary to the proper understanding of the psycho-analytic method. The lecture was attended on behalf of the Russian Ambassador by Baron Heyking, who gracefully acknowledged the growing recognition in this country of the achievements of Russian science. Over and above the originality of his work, amounting to real genius, Pavlov's generosity to his co-workers and pupils has made him the subject of a devoted affection and has formed a link in the chain of the Anglo-Russian scientific entente which is becoming realised.

CASE-TO-CASE INFECTION IN PNEUMONIA.

RECENT authorities agree that while pneumonia is unquestionably a communicable disease, it is not readily transmitted from person to person. Limited epidemics of pneumonia have been described, for the most part before the discovery of the pneumococcus had made the diagnosis a matter of precision. Even in epidemics where this organism has been proved to be the infective agent it must be remembered that the pneumococcus is such a frequent inmate of the fauces and naso-pharynx in health as to make it difficult to prove direct transference from person to person. When in two cases successively occurring in a household the same organism is isolated, the seed may have been lying dormant in each case and some common preparation of the soil have determined the incidence of the disease. The matter is still further complicated by the probability of the existence of healthy "carriers" of this as of the meningococcus. If the pneumococcus were not a single well-defined entity but included differing strains capable of precise identification, transference might more easily be demonstrated. In a brief paper in the June issue of the *Medical Journal of South Africa*, Mr. F. S. Lister contends that this is the case, and he cites, as an instance, the successive illnesses of a married couple, where the husband had acted as nurse to his wife and fell a victim to a precisely similar attack of pneumonia after an interval of 11 days. From the sputum of the second case Mr. Lister isolated, by passage through a mouse, a pneumococcus of a strain "G," which he identified through its agglutination by a stock anti-serum as belonging to a strain occurring but rarely in Europeans in South Africa, and this pneumococcus "G" gave the serological reaction in both the husband's and the wife's case, while no other strain which he tried did so. Recent researches by Dochez, Gillespie, and Avery in America confirm this view of the pneumococcus as a generic rather than a specific organism, and a further application of serological methods of identification may settle the vexed question of the origin of pneumonia epidemics.

ALCOHOL AND THE DEVELOPMENT OF THE FŒTUS.

THE present times have brought about at least one desirable condition of things—the serious problem and the serious man are more likely to receive serious attention than has been the vogue for many years past. More than this, the consideration of the serious problem and the serious man is far less likely to be upset by the pratings of the crank than was the case in times of peace. Into the workings of the legislature and into the workings of the laboratory alike has come a feeling that simple issues must be dealt with upon simple and effective lines, and that the eccentric and the mental gymnast must not be heard too far on questions into the solution of which much common sense and much accumulated human experience enter. For some years past it has been the fashion to pay an undue degree of homage to work which produced results contrary to common sense and accumulated experience. There is no need to single out examples of this type of research, for time and again we have been told that by some method—statistical, bacteriological, or chemical it may be—it had been determined beyond dispute that some custom we all supposed to be healthful was in reality bad, or some habit we all supposed to be noxious in reality did no harm to us nor to our descendants. With the accumulation of very much more of this type of work we might have looked for a day when the visitation of the sins of the fathers upon the children would have been regarded as an archaic formula. Of all questions which touch upon the present and future welfare of mankind, none has been exposed so much to the labours of the eccentric as has that of the influence of parental alcoholism upon the offspring. Common sense prompted the belief that the taking of any toxin into the system of the parent would probably affect the health of the germ cell, and so tend to be a harmful influence upon the well-being of the next generation. Accumulated experience confirmed this belief, and the average man confidently looked to see the children of alcoholic parents suffer in some degree from their parentage. In times of peace, when the breeding of the race up to its maximum of physical and mental effectiveness was not felt to be of the urgent moment that it is to-day, this was a subject in which any startling finding merely made a pleasing mental diversion. To be told that all our ideas upon the subject were wrong was a stimulus to academic argument, and provocative of but little else. But now if common sense and accumulated

experience can be backed by the weight of scientific experiment, and parental alcoholism can be shown to have its harmful effects upon future generations, then academic argument must be laid aside and the facts must plainly be told to a legislature and a people that was never before so well prepared to listen. It is therefore particularly opportune that at this time Dr. J. W. Ballantyne should give a résumé of his life work upon antenatal pathological conditions dependent on parental alcoholism; and should have ready to his hand the experimental results obtained by Stockard and Papanicolaou upon alcoholised guinea-pigs. It becomes abundantly clear that alcoholism in the parent exerts a harmful influence not only upon the individual germ cells (perhaps this is more marked in the male than in the female), but upon the conjoined cells, the embryo, and the fœtus; this will be apparent to everyone who has followed Dr. Ballantyne's reasoning in a paper read last week before the Society for the Study of Inebriety. Its conclusion in Dr. Ballantyne's own words runs as follows: "Alcohol is a danger to antenatal health and a menace to antenatal life at every one of the stages of that existence and through each of the progenitors." Cogent teaching such as this must tend to deepen the feeling of individual responsibility. But the hope which the times hold out is now very great; for with the country's need for the fitness of the coming generations it is a wider circle which will pay attention to this thing. Although Dr. Ballantyne observes, "It seems that it is detail which is baffling the strongest of governmental powers even when reinforced by the example and the approbation of monarchs," he must also note that since August, 1914, many salutary ideas have been embraced by this country without the direct intervention of governmental powers. It is in his appeal to "all intending parents" that hope lies, and his moderation of diction makes this hope likely of attainment.

Dr. S. G. Moore (as we have already announced), Dr. Amand Routh, Dr. Comyns Berkeley, and Lady Barrett will introduce the discussion on the Care of Pregnant Women, to be held in the Section of Obstetrics and Gynæcology of the Royal Society of Medicine on Thursday, Nov. 2nd.

THE Conference of Representatives of Local Medical and Panel Committees of the British Medical Association is to begin on Thursday, Oct. 19th, at 10 A.M., in the Connaught Rooms, Great Queen-street, London, W.C., and to continue on the following day if necessary. The Conference is to review the action of the Insurance Acts Committee as a result of the resolutions of the 1915 Conference; to discuss the proposed modifications of the 1917 Agreement; to examine the position of practitioners in connexion with the treatment of venereal diseases; to receive the report of the Insurance Acts Committee of Conference with the Insurance Commission on the present method of remuneration for medical attendance under the Insurance Acts; and to consider the question of collective bargaining by the British Medical Association in regard to agreements between panel practitioners and Insurance Committees. The Local Medical and Panel Committees of each insurance area are asked jointly to send one representative, who need not necessarily be a member of the British Medical Association.

DIPLOMAS IN STATE AND TROPICAL MEDICINE.

IT has been usual for us to include in the Students Number of THE LANCET an epitome of the introduction given at various universities and centres of medical education to medical men desiring to obtain diplomas in sanitary science, public health, state medicine, and tropical medicine. During the war some of this work has been suspended, for both teachers and taught being already registered medical men have been required in other spheres. But the public health of the country and of our colonial dependencies must be maintained, for this is one of our greatest guarantees of ultimate success in the struggle of endurance, and the machinery for the special education of public medical servants exists, as appears from what follows, and is ready to resume full activity at the earliest opportunity.

Resolutions, designed with a view of ensuring "the possession of a distinctively high proficiency, scientific and practical, in all the branches of study which concern the public health," have been adopted at various times by the General Medical Council from 1902 to 1911. Certain universities and corporations grant qualifications in Tropical Medicine which have not as yet been made registrable by statute.

University of Oxford.—An examination, conducted partly in writing, partly *viva voce*, and in each subject partly practical, is held in Michaelmas and Easter Terms in the following subjects:—General Hygiene, General Pathology (with special relation to Infectious Diseases), the Laws relating to Public Health, Sanitary Engineering, Vital Statistics. The examination is in two parts, which may be taken together or separately; but Part I. must be passed either before or at the same examination as Part II. The fee for admission to the examination is £5 for each part. Successful candidates are entitled to receive the Diploma in Public Health.

The First Part of the examination will comprise (*a*) a written paper of three hours in Chemistry and Physics; (*b*) a three hours' practical and *viva voce* examination in Chemistry and Physics.

The Second Part of the examination will consist of the following parts:—(*a*) Two written papers, each of three hours, dealing with General Hygiene (including Sanitary Engineering, Vital Statistics, and the Laws relating to Public Health); (*b*) a practical and *viva voce* examination in General Hygiene; (*c*) a written paper of three hours in Pathology and Bacteriology; and (*d*) a three hours' practical and *viva voce* examination in Pathology and Bacteriology.

Candidates in Part I. of the examination will be required to produce a certificate (1) of Laboratory Work in Chemistry as applied to Hygiene.

Candidates in Part II. will produce the following further certificates: (2) of a Practical Knowledge of the Duties, Routine and Special, of Public Health Administration; (3) of having had Practical Instruction in Bacteriology, and the Pathology of the Diseases of Animals transmissible to Man; and (4) of having attended the practice of a Hospital for Infectious Diseases at which opportunities are afforded for the study of the Methods of Administration. The courses of instruction in Chemistry applied to Hygiene and in Pathology and Bacteriology may be taken in the laboratories of any University in the United Kingdom, of any school of the University of London, of the Royal Army Medical College, of University College, Bristol, of any extramural school in Edinburgh, of Anderson's College, Glasgow, The Royal Institute of Public Health, and in any such other laboratory as may, in the case of any particular candidate, be approved of by the Regius Professor of Medicine. In the cases of certificates (2) and (4), the certificates shall be given in such form as shall satisfy the secretary to the Boards of Faculties that the candidate has conformed to the rules of the General Medical Council. The names of candidates must be sent to the Assistant Registrar of the University, Clarendon Building, Oxford, to whom applications for any further information should be addressed.

University of Cambridge.—Two examinations in so much of State Medicine as comprised in the functions of medical officers of health are held during the year. The examination is divided into two parts and demands

proficiency in all the branches of study which bear upon the duties of medical officers of health. The examinations in both parts will be oral and practical, as well as in writing. Candidates may present themselves for either part separately or for both together at their option; but the result of the examination in the case of any candidate will not be published until he has satisfied the examiners in both parts. Marks of distinction will be placed against the names of candidates who have specially distinguished themselves in either (1) general principles of hygiene; (2) bacteriology; (3) chemistry in Part I. of the examination; or (4) the second part of the examination, which has reference to State Medicine and to the applications of Pathology and Sanitary Science. Every candidate will be required to pay a fee of £6 6*s.* before admission or readmission to *either part* of the examination, but candidates who have presented themselves before the year 1896 will be readmitted to either part on payment of a fee of £5 5*s.* Candidates must before admission to either part of the examination produce evidence of having satisfied provisions (1), (2), and (3), and before admission to Part II. having satisfied provision (4), above mentioned.

Two Examinations in Tropical Medicine and Hygiene are conducted yearly by the State Medicine Syndicate of the University of Cambridge. The examinations are held in Cambridge early in January and in the middle of August. Each examination will extend over four days.

Any person whose name is on the Medical Register is admissible as a candidate to the examination provided (I.) that a period of not less than 12 months have elapsed between his attainment of a registrable qualification and his admission to the examination; (II.) that he produce evidence, satisfactory to the Syndicate, that he has diligently studied Pathology (including parasitology and bacteriology) in relation to Tropical Diseases, Clinical Medicine, and Surgery at a Hospital for Tropical Diseases, and Hygiene and Methods of Sanitation applicable to Tropical Climates. As evidence of study and attainments a candidate may present to the Syndicate (1) any dissertation, memoir, or other record of work carried out by himself on a subject connected with Tropical Medicine or Hygiene; (2) any Certificate or Diploma in Public Health or Sanitary Science he may have obtained from a recognised Examining Body. Such evidence will be considered by the Syndicate in determining whether he is qualified for admission to the examination and by the examiners in determining whether, if admitted, he shall be included in the list of successful candidates.

The examination will be partly in writing, partly oral, and partly practical and clinical (the clinical part will be conducted at a hospital for tropical diseases, at which cases will be submitted for diagnosis and comment), and will have reference to the nature, incidence, prevention, and treatment of the epidemic and other diseases prevalent in tropical countries. Every candidate who passes the examination to the satisfaction of the examiners will receive from the University a diploma testifying to his knowledge and skill in tropical medicine and hygiene. The fee for the examination is £9 9*s.*, and applications should be addressed to Dr. Graham-Smith, Medical Schools, Cambridge.

All applications for further information respecting these examinations and the courses of study should be addressed to the State Medicine Syndicate, the Chemical Laboratory, Pembroke-street, Cambridge.

University of London.—Candidates for the M.D. degree may offer State Medicine as a subject in which to graduate. Certificates must be produced showing that a course of practical instruction has been attended for the prescribed period, and that the course has included such chemical, microscopical, and meteorological work and exercises as more especially relate to sanitation. The attendance includes six months' practical instruction in a laboratory and six months' instruction in public health administration under the supervision of a medical officer of health, and three months' attendance on the practice of a hospital for infectious diseases. The examination consists of papers in State medicine, including hygiene, school hygiene, and forensic medicine; a paper in medicine; an essay; and a two days' practical examination. Candidates must satisfy the examiners both in the papers and in the practical tests. A *viva voce* examination may be held at the discretion of the examiners. In connexion with this degree the various metropolitan medical schools hold regular classes under teachers of Public Health and Sanitary Science, such instruction being also used to obtain the various diplomas of other Universities and of those Royal Corporations which grant them.

University of Durham.—Sanitary Science is the special object of the degrees in Hygiene. Candidates for the degree of Bachelor of Hygiene (B.Hy.) must be at least 22 years of age, registered, and a graduate in Medicine of a recognised university. They must spend six months at Newcastle-upon-Tyne studying Comparative Pathology, Practical Bacteriology, Sanitary Chemistry, and Physics, and have to pass an examination in Sanitary Chemistry, Physics, Comparative Pathology, Sanitary Legislation, Vital Statistics, Nosology, Climatology, Meteorology, Distribution of Health and Disease, Sanitary Medicine and Practical Hygiene. The fee for the examination for the degree of B.Hy. is 10 guineas and for the degree £6 6*s.* Candidates for the degree of Doctor of Hygiene (D.Hy.) must have acquired the degree of Bachelor of Hygiene, must for two years subsequently have been engaged in Public Health administration, or in research work relating to Public Health. The fee for the examination for the degree of D.Hy. is £5 and for the degree £6 6*s.* The regulations for examination for the Diploma in Public Health (D.P.H.) are the same as those for the degree of Bachelor of Hygiene, except that the candidate is not required to be a graduate in Medicine of a recognised University and the course of study need not be passed at Newcastle-upon-Tyne. The fee for the examination is 10 guineas and for the Diploma £3.

Victoria University of Manchester.—An examination in Public Health is held twice yearly. The examination is in two parts and is written, oral, and practical. Candidates may present themselves for Parts I. and II. separately or at the same time, provided that no candidate be admitted to Part II. unless he has already passed in Part I. No candidate's name will be published until he has satisfied the examiners in both parts of the examination. The fee for each part is £5 5*s.*, and must be paid on or before July 1st in each year. For any subsequent examination in the same part the fee will be £3 3*s.* Every candidate who has passed both parts of the examination to the satisfaction of the examiners, and who is legally registered, will receive a Diploma in Public Health. The examinations will begin about the end of March and the middle of July in each year. Holders of the Diploma in Public Health are eligible for examination for the Certificates in School Hygiene and Factory Hygiene after attending the prescribed periods of study and hospital practice.

University of Birmingham.—The University grants a degree of B Sc. in Public Health and also a Diploma in the same subject on the following conditions: Graduates in Medicine of this University may become candidates for the degree of Bachelor of Science in Public Health, by conforming to all the requirements laid down for candidates for the Diploma in Public Health, except that after graduating in Medicine all courses of study must be taken out in the University, and they must, in addition, have attended a three months' course of Geology in the University. The examinations will be held in the months of March and June and will consist of two parts, each part being written, oral, and practical. No candidate will be allowed to pass Part II. until he has passed Part I. Candidates may enter for Parts I. and II. separately or at the same time. The fee for each part of the examination is £5. Medical Officers of the Royal Navy who have attended courses in Hygienic Chemistry, Bacteriology, and Public Health at the Naval Medical School, Greenwich, will be admitted to the examinations for the Diploma in Public Health, whether they have previously been students at the Birmingham School or not; and the same applies to officers of the Royal Army Medical Corps who have studied Chemistry and Bacteriology at the Staff College and pursued the further course of study approved by the General Medical Council.

University of Liverpool.—The University grants a Degree in Hygiene (M.H.) and a Diploma (D.P.H.), and every facility is afforded for training in Sanitary Science and State Medicine. The curriculum for the Degree extends over a period of two years, the first of which is devoted to laboratory instruction and practical classes (including those for the Diploma); the second being devoted to advanced

study and research. The D.P.H. curriculum fees are: Chemistry, £5 5s.; Bacteriology, £5 5s.; Practical Sanitation, £15; Infectious Diseases, £3 3s. The courses may be taken out at any time, and students are allowed to work daily in the laboratories.

The University grants a Diploma in Tropical Medicine. Three courses of instruction are given every year. Two of these last for three full months—the Lent Course from Jan. 6th to April 5th and the Autumn Course from Sept. 15th to Dec. 13th. The Third Course, an Advanced Course, lasts one month, from June 1st to the 30th. At the end of each full course an examination is held by the University for its Diploma of Tropical Medicine (D.T.M.), which is open only to those who have been through the course of instruction of the school. The examination lasts three days and consists (1) of papers on Tropical Medicine, Tropical Pathology, and Tropical Sanitation and Entomology respectively; (2) of a clinical examination; and (3) of an oral examination. The advanced course consists entirely of Practical and Clinical Laboratory Work, given at the laboratory at the University. The fee for the full course of instruction is 13 guineas, with an extra charge of 10s. 6d. for the use of a microscope if required. The fee for the examination is 5 guineas. Applications should be made to the Dean of the Medical Faculty, University of Liverpool. Two University Fellowships of £100 a year each are open to students of the school, amongst others. Accommodation for research work is to be had at the University Laboratory. The Mary Kingsley Medal is awarded by the school for distinguished work in connexion with Tropical Medicine. The new laboratories are completed and ready for occupation on the termination of the war.

University of Leeds.—The University grants a Diploma in Public Health, and every facility is afforded for training in Sanitary Science and State Medicine. The examination, which is held twice in each year—namely, in June and December—is in two parts, and is written, oral, and practical. Candidates, before entering for the first part of the examination, must have held for not less than 12 months a registrable qualification in Medicine, Surgery, and Midwifery, and must present satisfactory certificates of having attended an approved course of instruction in Public Health in the University, or in a college or medical school recognised for this purpose by the University. Candidates before entering the second part of the examination must present certificates of having, after obtaining a registrable qualification, attended during not less than three months the clinical and administrative practice of a hospital for infectious diseases approved by the University. Candidates may present themselves for Parts I. and II. separately or at the same time, provided that no candidate be allowed to pass in Part II. unless he has already passed in Part I. Fees—The fee for each part is £5 5s., and for any subsequent examination in the same part £3 3s.

University of Sheffield.—The examinations for the Diploma in Public Health are open to all registered medical practitioners who have completed approved courses of study. The examination shall be in two parts. The subjects of the examination in Part I. shall be Chemistry and Bacteriology. Candidates may present themselves for examination in the subjects of Part I. either separately or at the same time. The subjects of the examination in Part II. shall be the General Principles of Public Health, with especial reference to Epidemiology, trade diseases, sanitation, inspection of articles of food, the storage and purification of water, and the principles of drainage. Parts I. and II. of the examination may be taken separately or at the same time. Courses of lectures and practical instruction in the subjects of the examination are given at the University. These courses may be attended by students intending to become candidates for the Diploma in Public Health of other Universities.

University of Bristol.—Diploma in Public Health. Candidates must be at least 23 years of age, shall be fully registered medical practitioners of not less than 12 months' standing as such, and shall have passed the examination prescribed by regulation. The examination is divided into two parts. The subjects of the First Part are Chemistry as applied to Public Health and Pathology and Bacteriology. Candidates for the First Part shall, during six months after having obtained a registrable qualification, have received practical laboratory instruction in Hygienic Chemistry, in Bacteriology, and in the Pathology of the Diseases of Animals Transmissible to Man. The subjects of the Second Part are: Public Health and Epidemiology, Sanitary Law, Vital Statistics, and Sanitary Reporting. Candidates for the Second Part shall, during six months after having obtained a registrable qualification, have been diligently engaged in acquiring a practical knowledge of the duties, both routine and special, of public health administration under the supervision of certain persons specified by the General Medical Council, a list of which can be obtained from the prospectus.

University of Edinburgh.—Two degrees in Science in the Department of Public Health are conferred by the University of Edinburgh—viz., Bachelor of Science in Public Health and Doctor of Science in Public Health. A Diploma in Tropical Medicine and Hygiene is also granted. Candidates for the degree of B.Sc. in Public Health must be graduates in Medicine of a recognised University, and must pass two examinations, for the first of which they must, after graduation in Medicine, have worked for at least 20 hours per week during a period of not less than eight months, of which at least five consecutive months must be in the Public Health Laboratory of the University of Edinburgh and the remainder either there or in a laboratory recognised by that University; they must also have attended courses of instruction in Physics and Geology in some Scottish University. Candidates are admitted to the Second Examination six months after having passed the First Examination, and must have attended two courses in Public Health approved for the purpose by Edinburgh University, each course consisting of 40 lectures at least; one of which courses shall deal with medicine and the other with engineering, each in its relation to public health. Graduates who have held the degree of B.Sc. in Public Health from the University of Edinburgh for a term of five years may offer themselves for the degree of D.Sc. in Public Health in that University. The fees are £3 3s. for the First and £3 3s. for the Second B.Sc. Examinations, and £10 10s. for the degree of D.Sc.

University of Aberdeen.—The Diploma in Public Health (D.P.H.) is conferred only on graduates in Medicine of a University in the United Kingdom not less than 12 months after medical graduation. Every candidate must produce evidence of having attended, after graduation in Medicine, during a period of six months, practical instruction in Hygiene and Bacteriology in laboratories approved of by the University, together with having during six months (whereof three months must be distinct from the period of laboratory instruction) been diligently engaged in acquiring a practical knowledge of the duties, routine and special, of Public Health administration under the medical officer of health of a county or large urban district. He must have regularly attended for three months the practice of a hospital for infectious diseases at which opportunities are afforded for the study of methods of administration. He must also have obtained practical instruction in the drawing and interpretation of plans. The diploma is conferred after an examination in Public Health held in March and July of each year. The fee is £5 5s.

University of Dublin (Trinity College).—The Diploma in Public Health is conferred, after examination, on the following conditions. The candidate must be a registered medical practitioner and have obtained a registrable qualification at least nine months before the examination. The candidate must have completed, subsequently to obtaining a registrable qualification, four months' practical instruction in a chemical and bacteriological laboratory or laboratories approved by the University, must have studied practically outdoor sanitary work for six months under an approved officer of health, and must have spent three months in a fever hospital where opportunities are afforded for the study of methods of administration. A special prospectus and a list of recognised laboratories may be obtained by application to the Registrar of the School of Physic, Trinity College, Dublin.

National University of Ireland.—At this University there is a Diploma in Public Health and a B.Sc. in Public Health. The Diploma may be granted to matriculated or non-matriculated students of the University who shall have completed approved courses of study and shall have passed the prescribed examinations, provided that it shall not be granted except to a registered medical practitioner. Candidates may present themselves for the examination after

an interval of not less than 12 months from the time of obtaining a registrable qualification. The curriculum extends over a period of not less than nine calendar months. Every candidate must produce a certificate that he has attended practical instruction in a laboratory, approved by the University, in Chemistry, Bacteriology, and the Pathology of the diseases of animals transmissible to man. The examination consists of two parts, which may be passed separately or together. Part I. comprises the following subjects: Chemistry, Meteorology and Climatology, and Sanitary Engineering and Architecture. Part II. comprises the following subjects: Bacteriology, Hygiene, Sanitary Law, and Vital Statistics. The examination in each part will be oral and practical as well as written.

For the B.Sc. in Public Health a candidate shall not be admitted unless he (*a*) shall have received the degrees of M.B., B.Ch., and B.A.O. at least one year previously; (*b*) shall have pursued an approved course of study in the Faculty of Medicine; and (*c*) shall have passed the prescribed examination. In addition to D.P.H. course the candidate will be required to take up (1) a Special Course of Pathology; (2) Bacteriology; and (3) Advanced Course in Hygiene. Each of these courses lasts three months.

University of Belfast.—A Diploma in Public Health is given by examination. Every candidate must produce evidence that, after obtaining a registrable qualification, he has during six months received practical instruction in an approved laboratory in which Chemistry, Bacteriology, and the Pathology of the diseases of animals transmissible to man are taught. After obtaining a registrable qualification every candidate must produce evidence that he has attended during three months the practice of a hospital for infectious diseases at which opportunities are afforded for the study of methods of administration. The examination must have extended over not less than four days, one of which shall have been devoted to practical work in a laboratory, and one to practical examination in, and reporting on, subjects which fall within the special outdoor duties of a medical officer of health. The examination will be held once yearly, Part I. in March, and Part II. in June. The first part of the examination will have reference to the general principles of sanitary science, and the second part to State Medicine and to the applications of Pathology and Sanitary Science. The fee for each part is 1 guinea.

Royal College of Physicians of London and the Royal College of Surgeons of England.—The following are the regulations for obtaining the Diploma in Public Health: The examination consists of two parts. The first part of the examination takes place in January, April, and July, and the second part in January and July. The fee for each part is £10 10*s.*, except for those who are diplomates of the Royal Colleges, who pay £6 6*s.* for each part. A candidate intending to present himself must give 14 days' written notice to the Secretary, at the Examination Hall, Queen's-square, Bloomsbury, W.C. He will be admissible to examination in Part I. on producing evidence (1) of having been in possession of a registrable qualification for at least 12 months; (2) of having attended thereafter practical instruction in a laboratory recognised by the Examining Board in England for at least 240 hours during a period of six months; and (3) of being at least 23 years of age. A candidate will be admitted to Part II. of the examination on producing evidence (1) of having been diligently engaged in acquiring a practical knowledge of Public Health administration during six months under certain specified conditions; (2) of having attended during three months the clinical practice of a hospital for infectious diseases; and (3) of being at least 24 years of age.

The Examination for the Diploma in the Diseases and Hygiene of the Tropics has been discontinued during the war.

The Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, the Royal Faculty of Physicians and Surgeons of Glasgow.—All candidates for the Diploma in Public Health must have a qualification which has been registered under the Medical Acts. Candidates must have attended not less than four calendar months' practical instruction in Chemistry and Bacteriology in a recognised laboratory or laboratories, must have studied outdoor sanitary work for six months under a medical officer of health or other sanitary officer; and must give evidence of attendance for three months at the practice of a Hospital for Infectious Diseases, at which he has received instruction in the methods of administration. The examination consists of two parts, and candidates may enter for both at one period or for either separately. The First Part includes (*a*) Laboratory Work (Chemistry and Bacteriology), (*b*) Physics and Meteorology; and the Second Examination embraces (*a*) Report on Premises visited, (*b*) Examination at Fever Hospital, (*c*) Examination at Public Abattoir, (*d*) Written and Oral Examinations on Epidemiology and Endemiology, (*e*) Vital Statistics and Sanitary Law, and (*f*) Practical Sanitation. The fee is 12 guineas for both examinations, or 6 guineas for either of them. A fee of 3 guineas is payable by rejected candidates for either examination. The examination is held twice yearly, in May and October. The published regulations provide detailed synopses of the subjects of examination. The Registrar for Edinburgh is Mr. D. L. Eadie, 50, George-square, and for Glasgow Mr. Walter Hurst, 242, St. Vincent-street.

Royal College of Physicians of Ireland and Royal College of Surgeons in Ireland.—Every candidate for the Diploma in Public Health must be a registered medical practitioner. He must subsequently to qualification (1) receive six months' laboratory instruction in Chemistry, Bacteriology, and the Diseases of Animals transmissible to man; and (2) during six months practically study outdoor sanitary work under a medical officer of health, and shall as an additional requirement attend a hospital for infectious diseases. Candidates are examined on four days, commencing on the first Monday of February, May, and November. The examination comprises the following subjects:—Hygiene, Chemistry, Meteorology and Climatology, Engineering, Vital Statistics, Sanitary Law, and Bacteriology. The fee for the examination is £10 10*s.* For further particulars apply to Alfred Miller, Secretary, Committee of Management; Office, Royal College of Surgeons, Dublin.

THE SERVICES.

ROYAL NAVAL MEDICAL SERVICE.

Temporary Surgeons: H. E. Scowcroft to *Victory*, for R.N. Barracks; and G. Lillico to *Vernon*.

ROYAL NAVAL VOLUNTEER RESERVE.

Surgeon: W. H. Bleaden to *Blake*.

ARMY MEDICAL SERVICE.

Temporary Colonel V. W. Low, C.B. (Captain, R.A.M.C., T.F.), relinquishes his temporary commission.

ROYAL ARMY MEDICAL CORPS.

Captain Frank A. Hepworth, R.A.M.C., T.F., to be temporary Major whilst employed at the Wharncliffe War Hospital.

To be temporary Captains whilst employed at the Keighley War Hospital:—J. N. Dobie and J. M. Crocker.

Robert Spence Barnard (Fleet Surgeon, R.N., retired) to be temporary Honorary Captain.

Temporary Lieutenant H. E. Newman relinquishes his commission on account of ill-health.

Temporary Honorary Lieutenant F. W. Goyder to be temporary Honorary Captain whilst employed at the St. John Ambulance Brigade Hospital.

A. T. Paterson to be temporary Honorary Lieutenant whilst employed with the St. John Ambulance Brigade Hospital.

ROYAL ARMY MEDICAL CORPS: SPECIAL RESERVE OF OFFICERS.

Lieutenant J. M. Watt to be Captain.

Temporary Lieutenant G. H. Barry, from Lancashire Fusiliers, to be Lieutenant.

ROYAL ARMY MEDICAL CORPS: TERRITORIAL FORCE.

West Lancashire Field Ambulance: Major R. Coffey to be temporary Lieutenant-Colonel whilst commanding a Field Ambulance.

East Anglian Field Ambulance: Lieutenant E. N. Hoffmeister to be Captain.

Wessex Field Ambulance: Major T. P. Puddicombe to be temporary Lieutenant-Colonel whilst commanding a Field Ambulance. Captain (temporary Major) H. N. Collier relinquishes his temporary rank on ceasing to command a Stationary Hospital.

Home Counties Field Ambulance: Captain J. R. Chalmers, from T. F. Reserve, to be Captain.

Wessex Casualty Clearing Station: Lieutenant Cyril A. Raison to be Captain.

Attached to Units other than Medical Units.—Major T. Kay to be temporary Lieutenant-Colonel whilst commanding a Field Ambulance. Lieutenant J. E. S. Wilson to be Captain.

Correspondence.

"Audi alteram partem."

MEDICAL CERTIFICATES AND FITNESS FOR MILITARY SERVICE.

To the Editor of THE LANCET.

SIR,—I cannot agree with Surgeon-Captain G. Sherman Bigg, whose letter on this subject appeared in your issue of Oct. 7th, that "the civilian practitioner practically is bound to give to a patient a certificate, but he words it in such a way that an intelligent military medical officer should be able to read between the lines," although no doubt this practice has prevailed to some extent, and much of "the differences of opinion" between military and civilian medical men may so be accounted for.

One is well aware of the pressure that is brought to bear upon the family doctor by anxious parents, interested business connexions, or the applicant himself, who is very apt to confuse his business interests with his health condition; but it is the duty of the civilian practitioner to advise his patient frankly whether there is or is not any physical or mental condition rendering him wholly or partially unfit for military service, and it seems to me that any certificate given for the consideration of the medical officer of the recruiting centre should plainly put the grounds upon which the medical opinion is based. The military medical officer cannot be expected to have time or inclination to "read between the lines."

Of course, the last word must be with the responsible military medical officer, but in my experience he, as a rule, gladly avails himself of any information given by private medical practitioners, when clearly expressed.

I am, Sir, yours faithfully,

Oct. 9th, 1916. R. DOUGLAS POWELL.

THE PREVALENCE OF VENEREAL DISEASES IN THE TROPICS.

To the Editor of THE LANCET.

SIR,—In reading the report of the recent Royal Commission on Venereal Diseases one is struck, as a practitioner in the tropics, at the lack of reference to the tropical colonies as a source of infected individuals. In Appendix 7 mention is made in the case of Liverpool that the worst cases are those infected abroad. No mention is made of the relative numbers. The case-books of the syphilologists in London would, I think, show a very large proportion of cases from the various tropical colonies.

The Colonial Medical Service has to some extent followed the Army and Navy in providing facilities for special work, but not, as far as I am aware, in venereal diseases. There are probably no statistics on the matter apart from hospital records, but most medical men in the tropics would, I think, endorse the view that there is much invaliding and loss of efficient work both among the official and unofficial members of the European community. My reason for writing this letter is that I deem the present time an opportune one to draw attention to the subject in countries where such diseases are not only very common but, owing to the climate and the presence of tropical disease, difficult to cure.

I am, Sir, yours faithfully,

RICHARD ROPER.

Ipoh, Federated Malay States, Sept. 9th, 1916.

THE NURSING PROFESSION IN INDIA.

To the Editor of THE LANCET.

SIR,—In a note under the above heading in THE LANCET of August 5th you say that the result of Dr. Masina's experiment to attempt to induce educated ladies of the Parsi community to train as sick nurses will be watched with interest, not only by the Parsi community but by the Indian community at large. It is not out of place in this connexion to draw your attention to the fact that in Bengal the Lady Carmichael Nursing Association is training nurses at the Sambunath Pundit Hospital in Calcutta, at the Scotch Mission Hospital at Kalimpong, and at the Victoria Hospital in Darjeeling. The material is excellent, and the progress achieved in training is remarkable, reaching a standard far beyond that for which it seemed justifiable to hope a year ago. The result of this experiment in Bengal merits at least as close an interest on the part of the Indian community at large as does the training of Indian nurses in the Western Presidency to which you refer.

I am, Sir, yours faithfully,

Darjeeling, Sept. 15th, 1916. CLAYTON LANE.

ALCOHOL IN THE TROPICS.

To the Editor of THE LANCET.

SIR,—How Dr. Lucas Benham could write about alcohol as he does in your issue of Sept. 23rd passes my comprehension. I am not a bigot. I use alcohol when indicated. Often I administer brandy to patients recovering from cholera, &c., but the man in the East who commences to drink whisky, &c., is playing with fire; he *may* not get burnt, but he generally does. I have been working in a Chinese port, and my experience all goes to prove that club life, lonely stations, human frailty—all tend to make easy the descent to a drunkard's grave.

If Dr. Benham does not know this he has either gone through life with his eyes shut, or else has never lived in the tropics.—I am, Sir, yours faithfully,

C. G. S. BARONSFEATHER, M.D. Dub.

Kingstown, co. Dublin, Oct. 4th, 1916.

MEDICAL WOMEN AND EQUALITY OF PAY.

To the Editor of THE LANCET.

SIR,—I write to draw attention to the worse terms offered to medical women as compared with men by both the Ministry of Munitions and the War Office. The former is trying to obtain women doctors for munition works at £400 a year, while men receive £500. The War Office does not pay the £30 for outfit nor give rank. We women doctors have stood out so hard for equal pay for equal work that it is to be hoped these differences will be rectified.

I am, Sir, yours faithfully,

Colwall, Malvern, Oct. 3rd, 1916. MARY H. WILLIAMS.

THE EFFECT OF FRESH HUMAN BLOOD SERUM ON ARTIFICIAL MEDIA.

To the Editor of THE LANCET.

SIR,—With reference to the articles on this subject in your issues of August 19th and Sept. 2nd, we have recently had occasion to examine several specimens of serum ultra-microscopically. When freshly drawn the insoluble colloidal protein contained therein displays far greater Brownian movement than if the serum has been standing some time. The ultra-microscopic appearance of serum is very similar to that of collosol iodine. The combination of amino-acids, which is the protective of the colloidal protein in serum (the latter, of course, containing the electrolyte sodium chloride, which would naturally destroy the colloidal condition but for the presence of protective) is more perfect than we have hitherto been able to manufacture, although we approximate very closely thereto. In our experience the germicidal value of a colloidal solution to some extent depends upon the amount of Brownian movement displayed by the individual particles. If this is so in the case of serum the reason why fresh serum should not be employed as a medium is evident; indeed, it is probable that absolutely fresh serum would exhibit mild germicidal properties. On the other hand, if fresh serum were subjected to ultra filtration in order to remove the colloidal protein it is probable that a perfect growing medium would be obtained. As a matter which might perhaps open a field for investigation, in the few cases which we have been able to investigate, the individual particles in protozoal serum appear larger than those in normal serum.

I am, Sir, yours faithfully,

JOHN WARD,

Elgin-crescent, W., Oct. 4th, 1916. Manager, Crookes' Collosols, Ltd.

MISS EDITH CAVELL AND HOMES OF REST FOR NURSES.

To the Editor of THE LANCET.

SIR,—Will you kindly allow me to take advantage of the fact that Oct. 12th is the first anniversary of the death of my sister, Edith Cavell, to say that she had long cherished the idea of establishing homes of rest for nurses. She had hoped to devote the latter years of her life, when her work in Brussels had finished, to providing places where nurses in need of temporary mental and physical rest from their work could receive the benefit of a real home, and so become again able to take up the burden of life with some chance of success.

After serious thought I decided to try to put my sister's project into practical shape, and I am glad to say that I have met with strong and wide support. An influential council has already been formed, and its members have satisfied themselves that there is a definite need for such homes in the nursing world. It is certain that this need will become increasingly acute as the war continues, and that when the war is over it will remain acute for a considerable period thereafter. This consideration alone should find an echo in the hearts of all desirous of helping those who have devotedly laboured in a time of national stress, who are interested in the welfare of working women, and who love and respect the memory of Edith Cavell, who gave her life to the profession of nursing.

May I add that a freehold house standing in about 3½ acres of ground in a most suitable locality, which will deal with the needs of about 100 nurses yearly, has been offered to me as a gift, provided that a fund sufficient for its permanent endowment as a home can be raised. And, lastly, may I hope that when the council puts forth its appeal it may find a response in all parts of the British Empire.

I am, Sir, yours faithfully,

F. M. SCOTT CAVELL.

The Hull and East Riding Convalescent Home, Withernsea, E. Yorks, Oct. 10th, 1916.

*** We have received a list, as yet a private one, of those who have already consented to join the council. They form an influential group of men and women, representative in every respect. We recommend the movement cordially to our readers as one for which they should obtain support from their patients. Donations may be sent to either Major W. McAdam Eccles, 124, Harley-street, W., or Mr. R. Martin-Holland, Martin's Bank, 68, Lombard-street, E.C., the treasurers of the fund.—ED. L.

BY a misreading of the manuscript, the affix "Mrs." was added to Mr. E. W. Hutton's signature in the letter which appeared from him last week pleading for routine radioscopy in military hospitals. Mr. E. W. Hutton is the chief radiologist at the Hôpital Notre Dame des Grèves, St. Malo.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—The first selection of President of the Royal College of Physicians under the new scheme took place last week, and has resulted in the nomination of Dr. Joseph F. O'Carroll, professor of medicine in University College, Dublin. On the last Friday in September the Fellows selected by ballot three candidates for the Presidency, of whom Dr. O'Carroll was one. The other two having signified their unwillingness to accept the office, Dr. O'Carroll's name will be submitted formally for election on St. Luke's Day.

THE LATE DR. ST. CLAIR B. SHADWELL.—Dr. St. Clair Shadwell, a well-known practitioner in the North-East of London, died at his residence at Walthamstow on Sept. 23rd, at the age of 64. He received his medical education at Guy's Hospital, obtaining the Membership of the Royal College of Surgeons of England in 1875. Subsequently, in 1891, he took the D.P.H. of the English Conjoint Board, and graduated M.D. of St. Andrews University four years later. After holding appointments at Guy's Hospital and the Great Ormond-street Hospital, he entered upon medical practice at Walthamstow, where he was consulting medical officer to the Dispensary, and for 13 years medical officer of health. He also had held the posts of certifying factory surgeon, medical examiner to the Board of Education and medical officer to the Post Office. An ardent Volunteer, he joined the movement quite early in his career, and received the V.D., retiring with the rank of Surgeon-Lieutenant Colonel of the 1st Volunteer Brigade Essex Regiment.

The War.

THE CASUALTY LIST.

THE following names of medical officers appear among the casualties announced since our last issue :—

Killed.

Capt. S. Clark, R.A.M.C., was a student at King's College Hospital, London, and qualified in 1896. He had held appointments at King's College Hospital and at Leeds General Infirmary, and was in practice at Fulham-road, London, prior to joining the R.A.M.C.

Capt. T. L. Ingram, D.S.O., M.C., R.A.M.C., attached King's Shropshire Light Infantry, was educated at Cambridge University and at the London Hospital, and qualified in 1903. He was at one time house surgeon at the Westminster Hospital and also at the Poplar Hospital, and when he joined the R.A.M.C. he was a medical officer of the Lutterworth Union and of the Market Harborough Union.

Capt. W. F. MacAlevey, R.A.M.C., was a student at St. Mary's Hospital, London, and qualified in 1915. He thereupon joined the R.A.M.C., and obtained his captaincy in February last.

Capt. F. S. Walcott, R.A.M.C., attached Northumberland Fusiliers.

Capt. E. R. Welch, R.A.M.C., attached Durham Light Infantry.

Died.

Surgeon W. H. Edmunds, R.N., qualified L.M.S.S.A. Lond. in 1913.

Wounded.

Capt. L. Adamson, R.A.M.C.
Capt. G. D'R. Carr, R.A.M.C., attached Sherwood Foresters.
Capt. H. Mathews, R.A.M.C., attached Northampton Regiment.
Capt. N. J. Barton, Canadian Army Medical Corps.
Capt. H. W. Bayly, R.A.M.C.
Lieut. W. A. Cochrane, R.A.M.C., attached Leicestershire Regiment.
Lieut. J. N. Cruikshank, R.A.M.C., attached Liverpool Regiment.
Lieut. T. M. Crawford, R.A.M.C.
Capt. W. C. Stewart, R.A.M.C.
Capt. B. N. Murphy, R.A.M.C., attached Coldstream Guards.
Lieut. J. Oag, R.A.M.C., attached Manchester Regiment.
Capt. O. A. Elliott, Canadian Army Medical Corps.
Capt. W. R. Pagen, R.A.M.C., attached East Kent Regiment.
Capt. E. R. Selby, Canadian Army Medical Corps, attached Canadian Infantry.

Previously reported presumed Prisoner at Kut-el-Amara, now reported Prisoner in Turkish Hands.

Capt. L. Murphy, R.A.M.C.

DEATHS AMONG THE SONS OF MEDICAL MEN.

The following sons of medical men must be added to our lists of those who have fallen during the war :—

Second Lieut. C. T. Rennie, Leicestershire Regiment, son of Dr. G. E. Rennie, J.P., of Sydney, New South Wales.

Lieut. G. J. R. Saunders, South Lancashire Regiment, attached Leicestershire Regiment, youngest son of Dr. E. A. Saunders, J.P., of Pembroke Dock, South Wales.

Second Lieut. S. M. Scott, Coldstream Guards, younger and only surviving son of the late Mr. J. H. Scott, F.R.C.S.I., of Dublin.

Capt. W. F. MacAlevey, R.A.M.C., son of Dr. W. C. MacAlevey, of Leicester.

Lieut. M. Wheeler-O'Bryen, Royal Warwickshire Regiment, elder son of Dr. J. Wheeler-O'Bryen, of Sydenham, London, S.E.

G. Addison, Canadian Expeditionary Force, eldest son of Dr. W. B. Addison, of the Scilly Isles.

HOSPITALS FOR WOUNDED OFFICERS.—A temporary hospital for officers, which after the war will be transferred to permanent quarters as a Russian Hospital in London, is to be opened in a house in South Audley-street, lent for the purpose by Sir Berkeley and Lady Sheffield. M. Mouravieff-Apostal and his wife are the donors of the new institution.—The Government has taken over possession of the Great Central Hotel, Marylebone, as a convalescent home for wounded officers. The building contains some 500 rooms.

OBITUARY OF THE WAR.

MORTON PETO, M.B., CH.B. LEEDS,

CAPTAIN, ROYAL ARMY MEDICAL CORPS.

Captain M. Peto, who died of wounds on Sept. 22nd at the age of 26 years, was the fourth son of the late Rev. A. H. Peto, of Leeds. Educated at Leeds Grammar School, he went on to the University and Medical School in Leeds. After graduating M.B., Ch.B. in 1912, he held resident posts at the Women and Children's Hospital, and at the outbreak of war he resigned the appointment of ophthalmic house surgeon at the General Infirmary to take a commission in the R.A.M.C. At first in charge of a field ambulance, he was later attached to the Cameron Highlanders and the Royal Berks Regiment. He was mentioned in Lord French's last despatch and was awarded the Military Cross for gallant conduct in June, 1916. The night before he met his death he had undertaken some dangerous work for the rescue of wounded men. This was successfully accomplished, but on returning from the first lines the following morning he was wounded by a shell and died the same day.

A colleague on the Headquarters Staff writes of Captain Peto: "He and I worked shoulder to shoulder in some very heavy fighting, and he helped me by his dauntless bravery and coolness under fire to do what I could to follow his example. His first thought was always for the wounded, and he faced any risk to succour them. His example will always remain to me a shining one, though his cheery presence and charming personality are no longer with us."

ARTHUR JOHN WAUGH, B.A. CANTAB., M.R.C.S., L.R.C.P. LOND.,

CAPTAIN, ROYAL ARMY MEDICAL CORPS.

Captain A. J. Waugh, who was killed in action in France about August 18th at the age of 28, was the third son of Mr. and Mrs. Walter Waugh, Chigwell Hall, Essex. He was educated at Forest School, and proceeded to Pembroke College, Cambridge, and afterwards to St. Bartholomew's Hospital, where he later filled the post of house physician. Subsequently he was appointed resident medical officer at the East London Hospital for Children. He resigned this appointment at the outbreak of war to take a commission in the Royal Army Medical Corps, and was promoted to captain about the middle of 1915. He had been attached to the North Staffordshire Regiment since 1914. He was instantly killed by a 4·2 shell which fell almost at his feet whilst he was waiting for the relief force. Captain Waugh was buried at Carnoy, and the cross on his grave has been inscribed "Pectore Robur," the Forest School song. The colonel and adjutant of the regiment have written very kind sympathetic letters, and speak most highly of his work, regretting the loss they and the regiment have sustained by the death of their good friend and companion. Captain Waugh was well known in amateur cricketing and football circles.

REGINALD JOSEPH WOOSTER, M.R.C.S. ENG.,

CAPTAIN, ROYAL ARMY MEDICAL CORPS.

Captain R. J. Wooster, who was killed on active service on Sept. 15th, at the age of 29 years, was fifth son of J. Ratliff Wooster, of Ealing. He was educated at St. Paul's School and St. Mary's Hospital Medical School, qualifying in 1911, and then holding in succession three house appointments. He obtained a commission in the R.A.M.C. after he had entered for the F.R.C.S. examination, and was attached to the Rifle Brigade. After working for some time as a garrison medical officer in France he rejoined a field ambulance. One of his chiefs writes of Captain Wooster that he was an energetic man who knew his work well and who proved a very capable resident medical officer. The facts that he was popular with his colleagues, both in civil and military life, and that he left behind him a record of ability and industry are noted by more than one correspondent.

J. LISTER GODDARD,

LIEUTENANT, NORFOLK REGIMENT.

Lieutenant J. L. Goddard, who was reported on Sept. 22nd last as wounded and missing and, a little later, as killed, was the third son of Major C. E. Goddard, of Wembley, President of the Recruiting Medical Board for Chelsea, and was himself destined to be a medical man. Educated at St. George's School, Harpenden, he entered University College as a medical student in 1912, and at the outbreak of war, having just completed his second year of study, he obtained a commission in the Norfolk Regiment, with which he saw service in the trenches for more than a year.

CHARLES EDGAR HOLTON SMITH, L.R.C.P. EDIN.,

CAPTAIN, ROYAL ARMY MEDICAL CORPS.

Captain C. E. H. Smith, who was killed in action in France on Sept. 16th, at the age of 32, was the eldest son of the late Charles Smith, of Milligan Hall, Taunton. He was educated at College Gaillard, Lausanne, the Moravian School at Neuwied-on-Rhine, and at Aberdeen and Edinburgh Universities, and qualified in 1911. At Aberdeen he belonged to a battalion of the Scottish Horse under Lord Tullibardine. After filling resident posts at the East Suffolk Hospital, Ipswich, and acting as second surgeon to the British Red Crescent Hospital in Tripoli during the Italo-Turkish War, he went into practice in 1912 at High Green, Cannock, Staffs. He joined the R.A.M.C. as a Temporary Lieutenant on Nov. 1st, 1914, and was promoted to Captain a year later.

Captain Smith, as many letters from brother officers testify, was a fearless officer who gave his time and finally his life ungrudgingly for the safety and well-being of the men under his charge. Captain Smith leaves a widow with two small children.

MIDDLESEX HOSPITAL AND THE ARMY MEDICAL SERVICE.—Surgeon-General M. W. Russell, Deputy Director-General of the Army Medical Service, delivered the introductory address at the Medical School of the Middlesex Hospital this year, and took for his subject the historical connexion between the hospital and the Service. This connexion, he pointed out, began well over 100 years ago, when, during the Revolutionary wars in France, from 1789 on, Frenchmen under the displeasure of the governing powers fled for refuge to England. The Middlesex Hospital then, placed at the disposal of some 30 or 40 of these refugees, destitute and broken in health, wards in which they were housed and nurtured. The first great figure in surgery who worked in the Middlesex Hospital and also with the British Army was Sir Charles Bell. Bell, who came to London in 1804, was, we learn from Surgeon-General Russell, working at the Haslar Hospital in 1809 among the sick and wounded of Sir John Moore's army. In 1815 he went to Brussels to tend the wounded of Waterloo, and of his work at that time the museum of the Royal Army Medical College possesses a wonderful memento in the shape of the water-colour sketches of the wounded whom he attended, Bell being, as is well known, a skilled artist. Two other Middlesex surgeons were mentioned especially by Surgeon-General Russell, John W. Hulke and George Lawson. Both had experience of military surgery in the Crimea, Hulke having worked in the hospitals of Smyrna and before Sebastopol, while Lawson shared in the glories of Alma, Inkerman, and Balaclava. The Crimea suggests inevitably the name of Florence Nightingale, and it is interesting to note that she had a characteristic association with "the Middlesex," for in May, 1854, she volunteered to give help to cholera patients who were then being admitted to the wards. They were mostly poor foreigners, the victims of a sharp epidemic in Soho. Surgeon-General Russell concluded an address which, though domestic in theme, was of wide interest in treatment, by alluding to the work done at the Middlesex Hospital and all the other large hospitals during the present war, and at the close of the address the dean of the hospital, Dr. H. Campbell Thomson, stated that 340 past and present students of the hospital had gone on active service, of whom 16 had been killed.

INSPECTION OF MOTOR AMBULANCES BY THE KING.—On Oct. 6th the King inspected at Buckingham Palace a convoy of 25 motor ambulances which the Yorkshire miners have presented to the British Red Cross Society and the Order of St. John. This convoy, which has been sent to France, cost about £15,000.

SCOTTISH WOMEN'S HOSPITALS.—News has been received from beyond Odessa of the hospital units sent out to work for the Serbian division of the Russian Army. The journey was uneventful and the reception of the units cordial. Three sections have been arranged—Hospital A, under Dr. Elsie Inglis; Hospital B, under Dr. Lilian Chesney; and a Transport Section.

MEDICAL SERVICE OF THE ROYAL NAVY.—In Part 3, Vol. IX. of the "Times History and Encyclopædia of the War," just issued, price 8*d*., there is an appreciative sketch of the part which medical science plays in maintaining the health of the navy and, as a consequence, in the successful prosecution of the war. As the writer points out, the tradition of the navy is to keep silence—"Little was heard by the world of the great work which these sea doctors accomplished, of the heroism revealed by them, of the sacrifices which they offered." This work is now made clear, for the problems which beset the Naval Medical Service in the care of the sailor both before and during an action are explained in a way to bring home to everyone the splendid organisation and traditions of service which belong to the medical as to all branches of the Royal Navy. There is included an inspiring account of medical work during the minor actions in the North Sea and in the great encounter of Jutland Bank, and the psychology of the seaman under the strain to which his nerves are subjected by constant watching and the need for preparedness is discussed in a vivid manner. Among the many illustrations are reproductions of portraits of Sir Arthur May, Director-General of the Naval Medical Service in the War, and of Sir James Porter, the late Director-General.

NEW WELSH HOSPITAL FOR WAR CRIPPLES.—The old Cardiff Mansion House has been purchased with the object of establishing an orthopædic hospital at Cardiff, similar to that which is already doing good work at Roehampton. The accommodation has been increased by the gift of two adjoining houses by the James Howell family. An appeal for funds has resulted in a sum of £20,000, Mr. J. P. Cadogan and Mr. W. Percy Miles giving £5000 each, an anonymous donor £7500, and Messrs. Morgan and Co. £2500.

A NEW ARMY DENTAL CAR.—On Oct. 9th the King and Queen inspected at Buckingham Palace a dental surgery car, the first of its kind to be used by the British Army. It contains two operation chairs, a bench and lathe for repair work, water-supply, gas cylinders for operations, and a sterilising plant. It is, in fact, a completely equipped miniature dental hospital on wheels. The car, which has been designed and built by the engineers of the Royal Automobile Club, whose services have been lent to the Red Cross Society, cost approximately £950, the funds having been supplied by the Civil Service Federation.

Mrs. E. M. N. Green, M.B., B.S., was the recipient last Saturday at Buckingham Palace of the V.C. awarded to her late husband, Captain J. Leslie Green.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At the First Professional Examination of the Conjoint Board held on Sept. 26th, 27th, 28th, and 29th the following candidates were approved in the undermentioned subjects:—

Chemistry and Physics.—Hawa Khairul-Nissa Attaoullah, London School of Medicine for Women; Gerald Cecil Wootton Curson, Guy's Hospital; William Dabbs, special study; Beatrix Helen Fairbanks, Birmingham University; Ralph Wilfrid Fairfax, King's College; Janet Hughes, South-Western Polytechnic; Aziz Yousif Ibrahim, Beirut and King's College; Violet Ruth Jeffery and Horace Abe Nathan, Birkbeck College; Isaac Resnikoff, King's College; Jacob Seelenfreund, London Hospital; and Mary Agnes Elizabeth Somers, Bristol University.

Chemistry.—Ali Khan Muzaffar Agha, King's College; Charles Spencer Anderson, St. Mary's Hospital; George Frederick Baxter, King's College; Dudley Hugh Cockell, St. Bartholomew's Hospital; Richard Owen Jones, Liverpool University; Tadros Ibrahim Makar, Assiut and King's College; and Thomas Ben Thomas, St. Bartholomew's Hospital.

Physics.—Mark Louis Barst and Solomon Blackman, London Hospital; Leslie Charles Frederick Chevens, St. Thomas's Hospital; David Hoole, Manchester University; Gerald Israelstam, London Hospital; Colin Campbell Mackinnon, Middlesex Hospital; Mary Colegrave Prideaux, London School of Medicine for Women; Robert Reisser, University College; Gerald Richmond Anderdon de Montjoie Rudolf, King's College; Doris Kathleen Shuttleworth, Leeds University; Phillip Abd-El-Malik Sika, King's College; Samuel Snelson, Manchester University; and Daisy Coutts Wallace, St. Andrews and Edinburgh Universities.

Biology.—Mark Louis Barst, London Hospital; Thomas Mace Beattie, Leeds University; Solomon Blackman, London Hospital; Nancy Barbara Danieli, University College; Herbert Davies, Birkbeck College; Reginald Norman Downing, London Hospital; Ralph Martin Ealand, Bristol University; Ralph Wilfrid Fairfax, King's College; Sophie Elizabeth Hymans-de-Tiel and Violet Ruth Jeffery, Birkbeck College; Evan Thomas Lloyd, Guy's Hospital; Tadros Ibrahim Makar and Daniell Maximos, King's College; Edmund Philbin, Manchester University; Gerald Richmond Anderdon de Montjoie Rudolf, King's College; Joseph Solomonoff, London Hospital; and Leslie James Timings, Birmingham University.

At the Second Examination in Anatomy and Physiology held on Sept. 28th and 29th and Oct. 2nd 50 candidates presented themselves, of whom 30 were approved and 20 were rejected. The following are the names and schools of the successful candidates:—

Ramrao Balchrushna Agaskar, Bombay University and Middlesex Hospital; Frederick Thomas Allen, St. Thomas's Hospital; Maurice Aronsohn, London Hospital; Sidney Thomas Barrett, Cambridge University; Charles Sidney Bluemel, University of Colorado; Moshek Zelmanovitch Bochenek, London Hospital; Gerald Arthur Augustine Bradnack, Guy's Hospital; Percy James Briggs, Cambridge University and Guy's Hospital; Benjamin Young Harper Christmas, Middlesex Hospital; Ignatius Joseph Cruchley, London Hospital; John Griffith Edwards, King's College; Clarence Franklin Eminson, Charing Cross Hospital; Denis Paul Guilfoyle, St. Bartholomew's Hospital; Reginald Jenner-Clarke, London Hospital; Francis William Kemp, Charing Cross Hospital and King's College; John Kendall, Guy's Hospital; Wright Lambert, Middlesex Hospital; Tudor David Llewelyn, University College, Cardiff; Maurice Marcus, London Hospital; Kenneth Mullen, Bombay University and Guy's Hospital; Thomas

Reed, Guy's Hospital; Rowan William Revell, University College; Herbert Leyland Sackett, St. Bartholomew's Hospital; Adolph Sebba, London Hospital; Cecil George Douglas Siggs, Guy's Hospital; Jacques Spira, Brussels University and King's College; Abbass Hilmy Talaat, Middlesex Hospital; Arthur Walford Taylor and Noel Sydney Bailey Vintner, St. Bartholomew's Hospital; and David Hardy Williams, London Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND: LECTURES AND MUSEUM DEMONSTRATIONS.—The demonstrations to be given in the theatre of the Royal College of Surgeons of England in Lincoln's Inn-fields during October will be open not only to practitioners but to medical students and first-aid and ambulance students, dental students being specially invited to attend Mr. Colyer's demonstrations. The course is as follows:—Monday, Oct. 16th, at 5 P.M.: Mr. S. G. Shattock, Wounds and their Repair; Wednesday, Oct. 18th, at 5.30 P.M.: Mr. J. F. Colyer, Fractures of the Jaw; Monday, Oct. 23rd, at 5 P.M.: Mr. S. G. Shattock, Wounds and their Repair; Wednesday, Oct. 25th, at 5.30 P.M.: Mr. J. F. Colyer, Fractures of the Jaw; and Monday, Oct. 30th, at 5 P.M.: Mr. S. G. Shattock, Injuries of Arteries.

In November the first series of a course of lectures on the Anatomy of the Human Body will be delivered by Professor Arthur Keith, Conservator of the Museum, during the afternoons of November, at 5 P.M., in the theatre of the College. This course is intended for first-aid and ambulance students, and is as follows:—Lecture I., Wednesday, Nov. 1st: The Heart and Great Vessels; Lecture II., Friday, Nov. 3rd: The More Common Sites of Hæmorrhage; Lecture III., Monday, Nov. 6th: The Lungs and Trachea; Lecture IV., Wednesday, Nov. 8th: Respiration; Lecture V., Friday, Nov. 10th: The Brain; Lecture VI., Monday, Nov. 13th: The Spinal Cord and Nerves; Lecture VII., Wednesday, Nov. 15th: The Structures concerned in Shock; Lecture VIII., Friday, Nov. 17th: The Anatomy of Wounds received in Warfare; Lecture IX., Monday, Nov. 20th: The Structures concerned in the Spread of Infections; Lecture X., Wednesday, Nov. 22nd: The Anatomy of the Ear and Skull; Lecture XI., Friday, Nov. 24th: The More Common Accidents to the Eye and Ear; Lecture XII., Monday, Nov. 27th: The Skin and Mucous Membranes—the more common accidents to which they are exposed. Anatomical preparations and specimens, used for purposes of illustration, will be placed on exhibition in the theatre from 3 to 5 P.M. on each lecture-day. On the following day the same preparations will be placed in the hall of the museum, where they may be studied between the hours of 10 A.M. and 5 P.M.

A second series of lectures will be given in January and February, 1917.

At the First Professional Examination for the Licence in Dental Surgery, held on Sept. 29th and 30th, the following candidates were approved in the undermentioned subjects:—

Mechanical Dentistry and Dental Metallurgy.—Herbert Oliver Holmes and Frederick Laurence King, Guy's Hospital; Cecil Frank Long, Bristol University; John Matley-Moore, Birmingham University; and William Wallace Harold Truscott and Richard Murray Underwood, Guy's Hospital.

Mechanical Dentistry.—Alexander Benjamin Aldred, Arthur Frederick Bartle, and Alan Raymond Cox, Guy's Hospital; Iris Elizabeth Gardiner, National Dental Hospital; Myer Ginsberg, Alwyn Norman Goudge, and Allistair Hyland Grieve, Guy's Hospital; Thomas Edward Hoggins, Birmingham University; John James, Guy's Hospital; Scholaum Meyerovitch Kropman, London Hospital; Helen Pattie Clara Mayo, National Dental Hospital; Alan Lethaby Morgan, Bristol University; Ernest Albert Nunn and Cornelis Hermanus Olivier, Royal Dental Hospital; William Goodwin Senior, Leeds University; and Stanley Ethelbert Tweney, Guy's Hospital.

Dental Metallurgy.—Christopher Egbert George Busbridge, National Dental Hospital; Lilian Forbes, National Dental Hospital; Hugh Donald Hoggard and Joseph Lauer, Royal Dental Hospital; Margherita Maria Loretz and Mary Jane Ripley, National Dental Hospital; Sidney Stamp, Royal Dental Hospital; Enid Walker, National Dental Hospital; and James Andrew Whittle, Royal Dental Hospital.

At the Preliminary Science Examination for the Licence in Dental Surgery, held on Sept. 26th, 28th, and 29th, the following candidates were approved in the undermentioned subjects:—

Chemistry and Physics.—Gwilym Wynne Griffith, University College, Bangor; and Christoffel Albertus Marais, Guy's Hospital.

Physics.—John William Kewley Cain, Douglas Eastern District Secondary School; Jamshed Bejurjee Chenoy, Royal Dental Hospital; Reginald Gwynne Griffiths and Harold James Lyon, Guy's Hospital; and John Christopher Leslie Phillips, University College, Cardiff.

Chemistry.—William Leslie Cooper Jones, Liverpool University.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates were successful:—

PRIMARY EXAMINATION, PART II.

Anatomy.—H. M. Brown, Guy's Hospital; W. R. Carling, Cambridge and Guy's Hospital; S. M. Cohen, Cardiff; K. M. K. Duff, Guy's Hospital; F. E. Edwards, Manchester; E. E. D. Gray, Guy's Hospital; F. B. Hobbs, Cambridge; T. James, St. Bartholomew's Hospital; T. A. Jordan and J. N. Laing, Manchester; G. L. Levin, King's College; F. Lyth and H. Lyth, Manchester; S. F. Mahmood, Cardiff; M. Marcus, London Hospital; J. E. B. Morton, Oxford; S. K. Rigg, Bristol; H. N. Schapiro, Guy's Hospital; H. H. Selim, St. Mary's Hospital; G. M. Trist, Charing Cross and King's College; D. H. Williams, London Hospital; and J. Yates, Manchester.

Physiology.—H. M. Brown, Guy's Hospital; W. R. Carling, Cambridge and Guy's Hospital; S. M. Cohen, Cardiff; K. M. K. Duff, Guy's Hospital; F. E. Edwards, T. A. Jordan, and J. N. Laing, Manchester; G. L. Levin, King's College; F. Lyth, Manchester; S. F. Mahmood, Cardiff; M. Marcus, London Hospital; J. E. B. Morton, Oxford; H. N. Schapiro, Guy's Hospital; T. C. Stephen, Manchester; and D. H. Williams, London Hospital.

UNIVERSITY OF GLASGOW.—At the Fourth Professional Examination for the Degrees of M.B. and Ch.B. the following candidates were successful:—

Joseph Edward Bannen, James Beveridge, Alexander George Brand, Henry Drummond Brown, William Moore Cameron, Allan La Barte Clark, David Clyde, Ann Kelly Cor[illegible]ck, James Crerar, Robert Cunningham, William Donald, Geo[illegible] Mundell Hetherington, Arthur Robert Hill, Tom John Ho[illegible]yman, James Neil Jamieson, Stewart Johnstone, Margaret Jane Thorburn Leitch, Hugh Ernest M'Coll (distinction in Surgery and Clinical Surgery), James MacAlister Mackintosh (distinction in Midwifery), Helen Young Murdock (distinction in Medicine and Clinical Medicine), David Bell Robertson, James Steel, John Stirling, Herbert Watt Torrance, Robert Nisbet Walker, and Alison Edgar Wilson.

Ernest M'Murchie Dunlop, who graduated on July 19th and is now on active service, gains the Brunton Memorial Prize of £10, awarded to the most distinguished graduate in medicine of the year.

KITCHENER NATIONAL MEMORIAL FUND.—A flag day has been fixed for Nov. 7th to be known as "Roll of Honour" Day, and the proceeds are to be devoted to the Lord Kitchener National Memorial Fund. Preparations have already progressed sufficiently throughout the country to justify the council of the fund in anticipating a generous response. The fund, which has for its president Queen Alexandra, has even now accomplished much along the lines on which it was established. It perpetuates the memory of Lord Kitchener in a manner that would assuredly have met with that distinguished soldier's heartiest approval. The main object is to make provision in the time of direst need for officers and men of the Army and Navy who have suffered total disablement. The Council has already dealt with many cases, and wheel-chairs, hand tricycles, special beds, attendants for the paralysed, and means of facilitating locomotion or alleviating suffering have been provided with promptitude, thanks to a generous gift from Mr. Fenwick Harrison of £50,000. The objects which the council has in view are: To equip and endow for all time a home for disabled officers. To establish a permanent fund for relieving disabled officers and men in their own homes. Scholarships are also to be founded for the sons of deceased and disabled officers, and for young men between 18 and 25 who have served with the forces. The organisation is in the hands of Miss C. May Beaman, who will welcome offers of assistance addressed to 10, West Bolton-gardens, London, S.W.

ROYAL VICTORIA HOSPITAL, BELFAST.—Like other charitable institutions, this hospital is faced at present with a rapidly rising expenditure, and an appeal urging the need for increased support has been issued by the board of management. The reasons for this increased expenditure are: increase of patients, the influence of the war (in the rise in price of food, drugs, dressings, &c.), and the greater cost of modern medical and surgical treatment. The cost of coal before the war was about £1000 annually; this year it will amount to almost £3000. Formerly each patient on an average cost little over £60 in the year, now it is more than £80, and the sum is still rising. As it is feared that this year there will be a deficiency of between £4000 and £5000 in the working expenses of the hospital, a strong subcommittee of the board of management has been appointed to look into the matter, and the general feeling is that what is needed is a larger number of annual subscribers, and also more subscriptions from the working classes, who in a great industrial centre like Belfast—whose population now exceeds 400,000—benefits much by such an institution.

THE LATE DR. ALEXANDER BALLANTYNE.—Dr. Alexander Ballantyne, one of the oldest practitioners in Midlothian, passed away at his house, Orfordholme, Gullane, on Oct. 3rd, in his eightieth year. A native of Chorley, Lancs, he had a distinguished career as a student at Edinburgh University, and after graduation he studied at Berlin and Vienna. He then settled down to practise at Dalkeith, and held a large and important practice in that locality for nearly half a century. Dr. Ballantyne was medical officer of health for many years of the Burgh of Dalkeith, and also the visiting physician to the Dalkeith Combination Poorhouse. He was a Fellow of the Royal College of Physicians and had been President of the Obstetrical and Harveian Societies. He was on the commission of the peace for Midlothian. He leaves a widow and two sons; the elder, Mr. John A. Ballantyne, is

resident at Carlisle, and the younger is Dr. Harold S. Ballantyne. In January of last year Dr. Ballantyne's youngest son, Commander Ernest O. Ballantyne, R.N., lost his life when H.M.S. *Viknor* foundered. Dr. Ballantyne will be much missed by a large circle of friends and members of the profession, by whom he was much esteemed and beloved. An old friend writes: "But it was not merely in his professional line he was appreciated. The personality of his wonderful bonhomie and kindly sympathetic nature brought him friends wherever he showed himself, and no doubt this was one of the secrets of his successful practice, as his cheery smile did as much to stimulate his patients as the best considered of prescriptions. In his private life he had an intense appreciation of music, and his great broad-mindedness and refinement of feeling made his conversation interesting on every subject. In every walk of life which he touched he gained many friends, and his loss is one which will be felt far and wide."

UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL.—The two Goldsmid Entrance Exhibitions, offered annually for competition in September, were awarded this year to G. V. W. Anderson, of University College, London, and A. W. Holgate, of Alleyn's School and University College, London.

THE LATE DR. OLIVE CLAYDON.—Miss Olive Claydon, M.D., B.S. Lond., who died at Oldham on Oct. 5th, had an extensive practice there, and was secretary of the Panel Doctors' Association. Outside medicine she took an active part in public life.

GREAT NORTHERN CENTRAL HOSPITAL.—A meeting is to be held in the Mansion House on St. Luke's Day, Wednesday, Oct. 18th, at 3 P.M., on behalf of the Great Northern Central Hospital, Holloway, N., in celebration of the Diamond Jubilee of the institution.

EDINBURGH UNIVERSITY: THE ADMISSION OF WOMEN STUDENTS.—During the last medical session 172 women were attending the extra-mural classes. It is understood that the large majority of these will now take advantage of admission recently granted to the medical classes of the University. No new accommodation needs to be provided at present, as some 500 men students are away serving with the Forces. The University Court is not providing women with facilities for clinical instruction in the coming year, and practical work will, as heretofore, have to be obtained outside the University in the extra-mural school of the Royal Colleges.

ILLEGAL SALE OF COCAINE: HEAVY FINE IMPOSED.—At Bow-street last week two qualified chemists were charged with unlawfully selling cocaine to a man who was found by the police lying unconscious on his bedroom floor in a London hotel. On removal to the Royal Free Hospital the man was found to be suffering from advanced cocaine poisoning. The police discovered three boxes, each of which contained cocaine in tablet form as well as cocaine in solution and a hypodermic needle. No doctor's prescription was found, and the chemist admitted having supplied the drug to an old customer without one. The stipendiary said he had considerable doubt whether he ought not to send the more responsible defendant to prison. He imposed fines of £100, with costs, in the one case, and £10 10s., with costs, in the other.

THE LATE DR. BERNARD SORMANI.—Bernard Sormani, whose death is announced from Amsterdam at the early age of 35 years, had already made his mark in bacteriology and serology. His training was received in the pathological laboratory of Professor Rotgans at Amsterdam, where he began to show the logical understanding and technical skill which were the characteristics of his later work. After his appointment as pathological director of the Onze-lieve-Vrouve Hospital, he published a paper on a method of determining the quantity of syphilitic antigen in the blood or liquor, and developed this work to a high level. A visit to England made him a keen disciple of Sir Almroth Wright's bacteriotropic methods, and he did original work on the prophylactic vaccination against hay fever, an account of which appeared in THE LANCET of Feb. 12th, 1916. His aim to secure the foundation in Amsterdam of an institute akin to that of v. Behring at Marburg was on the road to realisation when his life was cut short by an acute streptococcus infection acquired during his work.

THE death occurred at Oxford on Oct. 9th of Mr. Horace Hart, M.A., for many years controller of the Oxford University Press. He was the author of the well-known "Rules for Compositors and Readers," now in its twenty-third edition, originally intended for the staff of the Clarendon Press, but now enjoying much greater publicity.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

CROSS, W. FOSTER, M.R.C.S., L.R.C.P. Lond., has been appointed Senior Administrator of Anæsthetics to St. Bartholomew's Hospital.

GALLOWAY, R. P. R., MCILLWAINE, A. L., MOON, C. R. C., NORMAN, J. M., and TYRRELL, J., Resident Physicians to the Royal Infirmary, Edinburgh.

GARRETSON, W. T., M.D., and HOLBOROW, E. R., M.B., B.S. Lond., Clinical Assistants to the Royal Infirmary, Edinburgh.

HADFIELD, J. A., LAMONT, J. L., MATHEWSON, W. R., MILLER, R. W. N., M.B., Ch.B., STUMP, C. W., and WHITE, H. P. W., M.B., Ch.B. Edin., Resident Surgeons to the Royal Infirmary, Edinburgh.

LITHGOW, J. D., M.B., C.M. Edin., Assistant Surgeon to the Ear and Throat Department of the Royal Infirmary, Edinburgh (re-elected).

SHONE, F. C., L.M.S.S.A. Lond., Certifying Surgeon under the Factory and Workshops Acts for the Walthamstow District of the county of Essex.

THOMAS, Mrs. FRANK, M.B., Ch.B. Edin., has been appointed Supervisor of the Swansea Eye Clinic by the Swansea Education Committee.

Certifying Surgeons under the Factory and Workshop Acts: COAKER, F. W. J., M.R.C.S., L.R.C.P. Lond. (Bromsgrove, Worcester); JACKSON, J. P., M.B., B.S. Durh. (Millom, Cumberland); SIBBALD, B. I. G., M.B., C.M. Edin. (Crewkerne, Somerset), and WILLIAMS, W. M., L.R.C.P. & S. Edin., L.F.P.S. Glasg. (Clwtybont, Carnarvon).

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

When the application of a Belgian medical man would be considered the advertisers are requested to communicate with the Editor.

ASHTON-UNDER-LYNE DISTRICT INFIRMARY AND CHILDREN'S HOSPITAL.—Assistant House Surgeon. Salary £120 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £150 per annum, with board, &c.

BIRMINGHAM, LITTLE BROMWICH FEVER HOSPITAL.—Female Assistant Medical Officer. Salary £300 per annum, with board, &c.

BRISTOL, CLIFTON DISPENSARY, Dowry-square.—Resident Medical Officer. Salary £200 per annum and furnished house.

BRISTOL ROYAL INFIRMARY.—House Physician. Salary at rate of £120 per annum, with board, &c.

CARDIFF, KING EDWARD VII.'S HOSPITAL.—House Surgeon for six months. Also Fourth-year Student Dresser for three months. Salary at rate of 52 guineas per annum, with board, &c.

DENBIGHSHIRE COUNTY COUNCIL.—Female Assistant Medical Officer of Health. Salary £350 per annum.

DORSET COUNTY COUNCIL EDUCATION COMMITTEE.—School Dentist. Salary £260 per annum.

EVELINA HOSPITAL FOR CHILDREN, Southwark, S.E.—House Physician. Salary at rate of £160 per annum, with board, &c.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physician for six months. Salary 30 guineas.

ITALIAN HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, &c.

LEEDS PUBLIC DISPENSARY.—Female Resident Medical Officer. Salary £200 per annum, with board, &c.

LEICESTER ROYAL INFIRMARY.—Pathologist to Infirmary and Venereal Diseases Section. Salary at rate of £300 per annum. Also Medical Officers in Charge of Clinics and Beds. Salary £200 for Male Officer and £150 for Female Officer.

LONDON LOCK HOSPITAL (MALE), Dean-street, Soho, W.—House Surgeon for six months. Salary at rate of £150 per annum.

MANCHESTER ROYAL INFIRMARY CONVALESCENT HOSPITAL, Cheadle.—Resident Medical Officer, unmarried. Salary £225 per annum, with board, &c.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Resident Surgical Officer. Salary at rate of £150 per annum, with board, &c.

NEWCASTLE-UPON-TYNE, ROYAL VICTORIA INFIRMARY.—Four House Physicians, Four House Surgeons, Accident Room House Surgeon, House Surgeon to Aural and Ophthalmic Departments, House Surgeon to Skin and Gynæcological Departments, and House Surgeon to Out-patient Dressing Department.

NOTTINGHAM GENERAL HOSPITAL.—Two House Physicians and One Assistant House Surgeon for six months. Salary at rate of £250 per annum each, with board, &c.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—House Physician—House Surgeon for six months. Salary at rate of £80 per annum.

PLYMOUTH BOROUGH.—Assistant Medical Officer of Health. Salary £350 per annum.

PRESTON, LANCS, COUNTY ASYLUM, Whittingham.—Local Tenens, unmarried. Salary £7 7s. per week, with board, &c.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £60 per annum, with board, &c.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—House Surgeon for six months.

SHEFFIELD, ROYAL INFIRMARY.—Two House Surgeons. Salary £100 per annum, with board, &c.

SOUTH LONDON HOSPITAL FOR WOMEN, 163, South Side, Clapham Common, S.W.—Female House Physician and House Surgeon for six months.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House Physician. Salary £150 per annum, with board, &c.

STAFFORDSHIRE EDUCATION COMMITTEE.—Two Permanent and Four Temporary Female Assistant School Medical Inspectors. Salary £300 per annum.

SUNDERLAND ROYAL INFIRMARY, CHILDREN'S HOSPITAL.—Resident Medical Officer for six months. Salary £150 per annum, with board, &c.

WALSALL AND DISTRICT HOSPITAL.—Assistant House Surgeon and Anæsthetist. Salary £150 per annum, with board, &c.

WEST HAM UNION INFIRMARY, Whipps Cross-road, Leytonstone, N.E.—Resident Assistant Medical Officer for period of the War. Salary £300 per annum, with usual residential allowances.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of a vacancy for a Certifying Surgeon under the Factory and Workshop Acts at Clacton-on-Sea.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—Oct. 4th, at Prince's-gate, W., the wife of Surgeon J. Wroth Adams R.N., of a daughter.

CATES.—On Oct. 11th, at Laurel Mount, St. Helens, the wife of Joseph Cates, M.D., D.P.H., of a son.

FINN.—On Oct. 4th at Blenheim-gardens, Willesden Green, to Allan Finn, M.D., F.R.C.S., Temporary Captain, R.A.M.C., and Mrs. Allan Finn—a daughter.

FORREST.—On Oct. 4th, at Whitwell-road, Southsea, the wife of Fleet-Surgeon J. A. Forrest, of a daughter.

KEIR.—On Oct. 6th, at Beanacre, Melksham, Wilts, the wife of Captain Ivan Keir, R.A.M.C., of a daughter.

MACFARLANE.—On Oct. 6th, at Pembridge-gardens, W., to the wife of Dr. W. F. Macfarlane, W.A.M.S.—a daughter.

MARRIAGES.

PANTER—SAUNDERS.—Oct. 3rd, at All Souls' Church, South Hampstead, N.W., Surgeon Arthur Edward Panter, R.N., M.R.C.S., to Isobel, only daughter of Mr. and Mrs. William Mill Saunders, Stroydia, Radlett, Herts.

PATERSON—BROTHERSTON.—On Oct. 4th, in Edinburgh, Captain Robert McCheyne Paterson, R.A.M.C., to Caroline, third daughter of Robert P. Brotherston, Tyninghame, Prestonkirk.

DEATHS.

BOUSTEAD.—On Oct. 8th, at Adelaide-crescent, Hove, Brighton, Lieutenant-Colonel Robinson Boustead, I.M.S., aged 81 years.

BOYD.—On Oct. 6th, at Richmond, John Stewart Boyd, L.R.C.P., L.R.C.S., L.F.P.S.

BROWN.—On Oct. 6th, at Westminster Hospital, S.W., Ralph Brown, M.D., Assistant Medical Superintendent of Bethlem Royal Hospital, S.E., aged 36 years.

CHAWNER.—On Oct. 5th, at Hill House, Clay Cross, Derbyshire, Alfred Chawner, M.R.C.S., L.R.C.P., aged 63 years.

HAMILTON.—On Oct. 7th, suddenly, at Elm House, Hawick, John Rogerson Hamilton, M.D., aged 63 years.

INGRAM.—Killed, on or about the night of Sept. 16th, while out searching for wounded in front of the enemy wire, Captain Thomas Lewis Ingram, D.S.O., M.C., R.A.M.C. (attached to King's Shropshire L.I.).

LANGLEY.—On Oct. 3rd, Aaron Langley, L.R.C.P., &c., of Caldy, Streatham Common North, S.W., in his 71st year.

MACINDOE.—On Oct. 5th, at Morton, Torrington, North Devon, James Gray Macindoe, M.B., late Major, R.A.M.C. (T.) aged 47 years.

MEREDITH.—On Oct. 5th, at Little Massingham Manor, Norfolk, the result of an accident, William Appleton Meredith, J.P., F.R.C.S., in his 69th year.

SWALLOW.—On Oct. 7th, at The Limes, Walthamstow, Norman Healea Swallow, L.D.S., aged 34 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS, ETC., RECEIVED.

BALE, JOHN, SONS, AND DANIELSSON, London.
Acute Poliomyelitis (Lumleian Lectures, 1916). By F. E. Batten, M.D. Cantab., F.R.C.P.
First Principles in Therapeutics. By Giles Forward Goldsbrough, M.D. Price 7s. 6d. net.

BLACK, A. AND C., London.
Diseases of Children. By A. Dingwall-Fordyce, M.D., Ch.B., F.R.C.P.E. Price 10s. 6d. net.

CHURCHILL, J. AND A., London.
A Practice of Gynecology. By Henry Jellett, M.D., F.R.C.P.I. Being the fourth edition, revised and enlarged, of a Short Practice of Gynæcology. Price 21s. net.

CLARIDGE, G., AND Co., Bombay.
A Primer of Tropical Hygiene. Revised and enlarged. By Colonel R. J. Blackham, C.I.E., R.A.M.C. Third edition. Price 12 annas.
Indian Ambulance Training. By Colonel R. J. Blackham, C.I.E., R.A.M.C. Price 12 annas.
Indian Manual of First Aid. By Colonel R. J. Blackham, C.I.E., R.A.M.C. Fifteenth edition. Price 1 rupee.

LONGMANS, GREEN, AND Co., London.
Dictionary of French and English and English and French. Compiled by John Bellows. Revised and enlarged by his son William Bellows. Third edition. Price 5s. net. Pocket edition. Price 9s. net.

WRIGHT, JOHN, AND SONS, Bristol.
When to Advise Operation in General Practice. By A. Rendle Short, M.D., B.S., F.R.C.S. Price 5s. net.
Surgical Contributions from 1881-1916. By Rutherford Morison, M.B., F.R.C.S. Edin., F.R.C.S. Eng. Vol. I. General Surgery 15s.: et. Vol II. Abdominal Surgery. 30s. net. Two vols., 42s. net.

Notes, Short Comments, and Answers to Correspondents.

THE EVENING STOOL.

To the Editor of THE LANCET.

SIR,—In addition to those adduced by "Personal Experience" in your issue of Oct. 7th, there are other reasons in favour of the evening stool. One is important, especially to bad sleepers. The most favourable bodily condition for sleep is that the upper part of the alimentary canal should be well filled. After food, sleep, is the rule throughout the animal kingdom, and is exemplified in all but those herbivorous animals that, in a state of nature, eat almost continuously. But it is scarcely less important that the lower part of the canal should be empty. Before starting on the perilous course of administering hypnotics, the plan of securing an evacuation in the evening should always be tried. It will often render the administration of hypnotics unnecessary.

I am, Sir, yours faithfully,

Oct. 10th, 1916. CHAS. A. MERCIER.

To the Editor of THE LANCET.

SIR,—I am glad that "Personal Experience" has called the attention of the readers of your journal (Oct. 7th, p. 663) to this important subject. I have been in the habit of impressing on my patients the necessity of regular evacuations—viz., the first thing in the morning before the bath, which answers two purposes, the washing of the anus and the evacuation of the bowels, and the last thing at night before retiring for the night, so as to have no poisonous matter remaining in the bowels during the night hours.

To refer to another subject mentioned in THE LANCET last week, some time ago I was consulted by a sufferer from angio-neurotic œdema who had been under the treatment of several medical men without relief. The case of "Major, R.A.M.C. (T.F.)," who asked for advice from his fellow practitioners in your columns, appears to be a facsimile of the one I treated successfully. I ordered my patient a brisk purge with a saline mixture, followed up by palatinoids of potassium permanganate to be taken three times a day. After the second day my patient was better, and in a week he was cured and has had no return of the rash.

I am, Sir, yours faithfully,

J. BRINDLEY-JAMES, L.R.C.P.I., M.R.C.S. Eng.
Physician to St. Mary's Training College, Brook Green, W.

Oct. 9th, 1916.

ETYMOLOGY OF THE TERM "BOCHE."

To the Editor of THE LANCET.

SIR,—The suggestion made by Dr. H. Kerr in THE LANCET of Sept. 23rd that the origin of the term "boche" may be the word "botch" or its variant spelling "boche," meaning a "swelling," probably has some foundation. In THE LANCET of Jan. 29th, 1916, on the shape of heads, it is stated that "boche" is slang for "blockhead." They are closely connected; for the "swelling" was the "boss"; in French, "bosse"; in old French "boce"; meaning also a "knob" or "head." Boce and boche are also in Chaucer. By some it is thought to be an abbreviation of French "Caboche" (Latin, Caput), a blockhead. Anyhow, there is strong evidence that it means head or "hard head." Long ago the Germans were called "têtes-carrées," square heads. To name soldiers by their heads and headdresses is natural. Cromwell's soldiers were called "Roundheads." "Alboche" has also been used in French. This is no doubt a combination of "Allemand" and "boche." The meaning of "head" clings to the word "boche." The French expression "tête de boche" means "a hard-headed fool": "a German"; also a "rake" or profligate. (See Dictionary of Argot or French and English Slang by W. von Knoblauch, published by Routledge, London.)

Dr. Kerr suggests that to call a man a "boche" is equivalent to calling him a "bubo." Although this is said by lexicographers to be derived from Greek *Boubon*, the groin, in the old French-English dictionary of Boyer (before 1729) it is spelt "Bobo," and the meaning is a "swelling." This seems more like English "Bob," a knob or swelling, or "cluster"; or it may well be connected closely with Spanish and Portuguese "Bobo," meaning "Blockhead," and English "booby." This will be seen by referring to Diez's well-known dictionary of the Romance languages; and he suggests that it means "Balbo," which means "stammerer" (Latin—balbutire, to stutter). A "foreigner" in more than one tongue was called either "a dumb man" or "a stutterer" because he could either not speak the home tongue at all or could only stammer it, and therefore he was a "blockhead." It will be seen that this is an alternative explanation to that of imputing the origin of the word to the consideration of the shape of the head.

I am, Sir, yours faithfully,

Sept. 30th, 1916. W.

ANGIO-NEUROTIC ŒDEMA.

To the Editor of THE LANCET.

SIR,—I have read with much interest the letter from "Major, R.A.M.C. (T.F.)," in THE LANCET of Oct. 7th. A similar case came under my notice a few weeks ago. It is obvious these cases are very difficult to treat. Personally I use continuous counter irritation in dealing with such, basing my practice on the theory that the chief underlying cause is microbial. The treatment tends to reduce the number and virulence of micro-organisms in the system. The form I would recommend is multiple superficial acupuncture followed by an irritant, and I should be glad to give your correspondent full particulars.

I am, Sir, yours faithfully,

Bournemouth, Oct. 9th, 1916. W. J. MIDELTON.

To the Editor of THE LANCET.

SIR,—In an article by Dr. A. J. Whiting on this subject, published in THE LANCET some three years ago the value of thyroid extract in these cases was pointed out.

There is evidence in the literature of the subject that the treatment has been successful.

I am, Sir, yours faithfully,

Oct. 10th, 1916. M.R.C.S.

To the Editor of THE LANCET.

SIR,—In answer to the letter of "Major, R.A.M.C. T.F." in your last issue, I suppose that he has tried calcium and intestinal disinfectants?

I had a very obstinate case in private till recently. The patient had severe giant urticaria after any form of exercise or moderate work. This had lasted for years, and numerous medical advisers, general and special, had attempted its cure without any improvement. The patient was advised total abstention from tea and coffee. The result was instantaneous and complete relief, even after heavy exercise. Cocoa was allowed in moderation.

I am, Sir, yours faithfully,

Oct. 10th, 1916. R.A.M.C.

THE NEW LIGHTING ORDER.

ACCORDING to the new Lighting Order, which came into force recently in the Metropolitan Police district, lights in London must, from Monday next, Oct. 16th, until the end of the month, be obscured at 5.30 P.M. until one hour before sunrise. The Order applies to the City of London and the whole of the Metropolitan Police district, with the exception of the provisions relating to blinds in railway carriages and lights on vehicles. From Nov. 1st the hour will be 5 P.M.

Digitalis.—The circumstances must indeed be rare in which a hypodermic syringe cannot be sterilised by Wright's simple method. If it is impossible to apply heat it is sufficient to fill the syringe with acid. carbol. liq. for 24 hours. Probably most of those who constantly use syringes for injection purposes do not frequently re-sterilise them. A syringe which has been autoclaved when new, and is washed out after use with 1 in 20 carbolic, sterile water, or even freshly drawn tap water, is very unlikely to convey infection. The needle, if of platinum-iridium, can be flamed each time before use. These precautions appear to be sufficient even in bacteriological work. Of course, we are not referring to the use of a syringe for exploration purposes, but assume that nothing but sterile liquid is drawn up into it.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

MEETINGS OF SECTIONS.

Thursday, Oct. 19th.

DERMATOLOGY (Hon. Secretaries—J. E. R. McDonagh, Henry MacCormac): at 5 P.M.

Exhibition of Cases (at 4.30 P.M.).

Cases and Specimens:

Dr. A. Whitfield: Specimen of Acarus and Run from a Kitten, with Notes on Human Infection derived therefrom.

Dr. Pernet: (1) Sclerodermia; (2) Primary Syphilis of Lip in a Woman.

Dr. H. G. Adamson: Rodent Ulcer of Unusual Type and Distribution.

Friday, Oct. 20th.

ELECTRO-THERAPEUTICS (Hon. Secretaries—E. P. Cumberbatch, Robert Knox).

CLINICAL EVENING (at 8.30 P.M.).

Members who desire to make communications, show cases, or to exhibit instruments, skiagrams, &c., are requested to give notice to Dr. Cumberbatch (15, Upper Wimpole-street, W.) immediately.

LONDON DERMATOLOGICAL SOCIETY, St. John's Hospital, 49, Leicester-square, W.C.

TUESDAY.—4.30 P.M., Presidential Address. Cases sent for Consultation. Demonstration of Pathological Specimens. 5 P.M., Exhibition of Clinical Cases by Dr. W. K. Sibley, Captain W. Griffith, Dr. J. L. Bunch, Dr. C. Kempster, Mr. C. H. Mills, and Dr. M. Dockrell.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover-square, W.

WEDNESDAY.—8 P.M., Paper:—Helen P. Goodrich, D.Sc., and M. Moseley: On Certain Parasites of the Mouth in Cases of Pyorrhœa. Exhibition of Specimens of V ivocaceæ.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos-street, Cavendish-square, W.

FRIDAY.—5.30 P.M., Paper:—Dr. A. Macdonald: The Position of Malaria in Sanitary Administration. Followed by a discussion.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East.

WEDNESDAY—4 P.M., Harveian Oration:—Sir Thomas Barlow.

POST GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Mr Gray: Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women.

TUESDAY.—2 P.M., Medical and Surgical Clinics. X Rays Mr. Baldwin: Operations. Dr. Banks Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Banks Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations. Dr. Simson: Diseases of Women.

THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Mr. Gray: Operations. Mr. B. Harman: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Simson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Banks Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Banks Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Eye Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patients (Mr. E. Gillespie). 2.30 P.M., Medical Out-patients (Dr. T. R. Whipham); Gynæcological Out-patients (Dr. Banister) 3 P.M., Medical In-patients (Dr. R. M. Leslie).

TUESDAY.—2.30 P.M., Surgical Operations (Mr. Carson). Clinics:—Medical Out patients (Dr. A. G. Auld); Surgical Out-patients (Mr. Howell Evans); Nose, Throat, and Ear Out-patients (Mr. C. H. Hayton). Radiography (Dr. Metcalfe). 3.30 P.M., Medical In-patients (Dr. A. J. Whiting).

WEDNESDAY.—Clinics:—2.30 P.M., Throat Operations (Mr. C. H. Hayton). Children Out-patients (Dr. T. R. Whipham); Eye Out-patients (Mr. R. P. Brooks); Skin Out patients (Dr. H. W. Barber). 5.30 P.M., Eye Operations (Mr. R. P. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patients (Dr. A. J. Whiting); Surgical Out-patients (Mr. Carson); Radiography (Dr. Metcalfe). 3 P.M., Medical In-patients (Dr. R. M. Leslie).

FRIDAY.—2.30 P.M., Surgical Operations (Mr. Howell Evans). Clinics:—Medical Out-patients (Dr. A. G. Auld); Surgical Out-patients (Mr. E. Gillespie); Eye Out-patients (Mr. R. P. Brooks).

METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 11th, 1916.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb	Dry Bulb.	Remarks
Oct.	5	29·790	W.	0·04	110	69	59	59	62	Cloudy
,,	6	29·800	S.W.	...	73	64	62	61	63	Overcast
,,	7	29·816	S.W.	...	105	65	56	53	57	Cloudy
,,	8	29·980	S.W.	...	90	66	55	57	59	Cloudy
,,	9	30·026	S.	0·05	95	67	58	57	60	Cloudy
,,	10	30·060	S.	...	90	65	57	58	60	Overcast
,,	11	30·100	S.W.	...	83	66	59	57	60	Cloudy

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IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, *and when accompanied by blocks it is requested that the name of the author, and if possible of the article, should be written on the blocks to facilitate identification.*

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

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Letters relating to the publication, sale, and advertising departments of THE LANCET should be addressed "To the Manager."

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